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TEXAS CONCHOLOGIST Vol. XXXV, No. 1, DECEMBER, 1998

Turbonillid Taxa for Europe, Mediterranean and West Coast of Africa

By Helmer Odé

Note: The Author makes personal comments and observations regarding the following listed species.

aberrans Reuss, 1867, *Turbonilla*, p. 159, pl. 7, fig. 10. Miocene of Poland and Austria. Possibly not turbonillid but *Ebala*.

abrardi Fischer Piette and Nickles, 1946, *Turbonilla*, p. 59, fig. 17. Recent, Dakar, West Africa. Described from a single specimen.

absoluta Goldfuss. non vidi. See Bronn, 1848, p. 1327 and 711. Listed as *Turbonilla*.

acicula Lamarck, 1806 (1804?), *Auricula*, pl. 9, fig. 9. Tertiary of Grignon, France. Possibly a *Pupasyrnola*. By many workers reported as *Turbonilla*, f. i., Bronn, 1848; Orbigny, 1850; Deshayes, 1837; Watelet, 1870; Briart and Cornet, 1873; Vincent and Rutot,1879. A probable synonym is *Turbonilla angusta* Deshayes,1864, p. 275, Atlas, pl. 20, figs. 13,14. Eocene of Paris Basin. Also close is *Turbonilla laevissima* Bosquet, 1859, p. 18, pl. 2, fig. 5, from the Oligocene of Western Europe. [Not *Bulimus aciculus* Dubois, 1831, p. 48, pl. 7, figs. 49, 50, perhaps a *Monoptygma*, (see von Koenen, 1882, p. 268), Miocene of Germany and Austria, of which a synonym is *Chemnitzia striata* Hoernes, 1856, p. 541, pl. 43, figs. 21a, b, Vienna Basin; nor *Melania acicula* Philippi, 1836, p. 158, pl. 9, fig. 6, for which, see *Pyramus laevis* Brown, 1827; nor *Turbonilla acicula* Holmes, 1860, p. 86, pl. 13, figs. 10,10a, b, east coast of North America, which may be *T. interrupta*, Totten, 1835].

acostostrangulatus Sacco, 1892, *Pyrgolampros*, p. 87, pl. 2, fig. 89. Tertiary (Elveziano) of northern Italy.

acuminata Keyserling, 1846, *Chemnitzia*, pl. 11, fig. 15. Possibly not pyramidellid. [Not *Turbonilla* (*Pyrgolidium*) *internodula acuminata* Harmer, 1920, p. 574, pl. 49, fig. 36; nor *Turritella acuminata* Goldfuss, 1852, (non vidi); see also Bronn, 1848, p. 1327 (*Turbonilla*)].

acuminata Harmer, 1920, *Turbonilla* (*Pyrgolidium*) *internodula* var... p. 574, pl. 49, fig. 36. See *internodula* S, V, Wood, 1848.

acuta Donovan, 1804, *Turbo*, pl. 179, fig. 1. This is either *Turbonilla lactea* Linne, 1758, or *Turbonilla delicata* Monterosato, 1874.

acuticostata Speyer, 1871, *Turbonilla*, p. 63, pl. 11, figs. 6 a-e. Upper Oligocene of Germany. Perhaps a synonym of *Auricula costellata* Grateloup, 1827, but this is not generally accepted. Another synonym appears to be *Turbonilla dentata* Speyer, 1871, p. 64, pl. 11, fig. 5. Oligocene of Germany. Erroneously assigned to von Koenen, 1882, by Cossmann, 1921, no. 279. [Not *acuticostata* Jeffreys, 1884; see there].

acuticostata Jeffreys, 1873, *Odostomia*, p. 112. Nomen nudum. Validated in 1884, p. 359, pl. 27, fig. 2. Renamed *postacuticostata* by Sacco, 1892; see there.

acutina Sacco, 1892, *Turbonilla astensidelicata* var..., p. 80,pl. 2, fig. 73. See *astensidelicata* Sacco, 1892.

acutissima Monterosato, 1884, *Turbonilla*, p. 92. See *delicata* Monterosato, 1874.

acutorecta Sacco, 1892, *Turbonilla*, Vol. 11, p. 79. See *Turbonilla costellata* Grateloup, 1827.

adensecostata Sacco, 1892, *Pyrgostelis rufa* var...,part 12, p. 4. See *Pyramis crenata* Brown, 1827.

alba Pennant, 1818, *Voluta*, p. 296. See *Turbo lactea* Linné 1758.

albella Lovén, 1846, *Turbonilla*, p. 91. Non vidi. Is an *Odostomia*, not turbonillid. [Not *Turbonilla albella* A. Adams, 1861, 298. Recent from Shantung China.].

albida Monterosato, 1877, *Odostomia* (*Turbonilla*), p.40; See *Turbo striatulis* Linné, 1766.

albina "Monterosato" Coen, 1933, *Turbonilla* (*Pyrgostelis*), p. 54. Could be *Pyramis crenata* Brown, 1827, or is an error in spelling.

alloeomorpha Boettger, 1906, *Turbonilla* (*Sulcoturbonilla*) *turricula* var...; See *turricula* Eichwald, 1853.

alpina Winkler, 1861, *Turbonilla*, p. 465, Jurassic fossil from Germany. Not pyramidellid. [Not *Strioturbonilla alpina* Sacco, 1892; see there].

alpina Sacco, 1892, *Strioturbonilla*, p. 94, pl. 2, fig. 108. Tertiary (Piacenziano) of northern Italy. Cited by Dall and Bartsch, 1904, p. 7, as type of *Strioturbonilla*. See also Friedberg, 1954, p. 459, pl. 28, fig. 5, and Caprotti, 1974, p. 36, pl. 4, fig. 5. [Not *Turbonilla alpina* Winkler, 1861, which is not pyramidellid, but a Jurassic fossil from Germany]. There are some "varieties": *Strioturbonilla alpina* var, *basidepressula* Sacco, 1892, p. 95, pl. 2, fig. 111. Miocene of Monte Mario, Italy. *Strioturbonilla* alpina var. *mioappenninica* Sacco, 1892, p. 94, pl. 2, fig. 109. Miocene of the Italian Piedmont; *Strioturbonilla alpina* var. *mioscalarata* Sacco, 1892, p. 94, pl. 2, fig. 110. Miocene of Monte Gibbio, Italy; *Strioturbonilla*

alpina var. *stazzanensis* Sacco, 1892, p. 95, pl. 2, fig. 12. Miocene of Stazzano, Italian Piedmont.

alsatica Andreae, 1884, *Turbonilla* (Syrnola), p. 3, Tertiary, of the Elsas. Not turbonillid, but a *Syrnola*.

altavillensis Monterosato, 1872, *Turbonilla*. Pleistocene of Altavilla, Sicily. See also Cossmann, 1921, p. 282.

alvaniella Boettger, 1906, *Turbonilla* (*Paraturbonilla*), p. 132, No. 456. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 243, pl. 12, fig. 39.

ambigua Weinkauff, 1868, *Turbonilla*, Vol. II, p. 216. Recent, Mediterranean. New name for *Rissoa gracilis* Philippi, 1844, p. 128, pl. 13, fig. 13, which is *Odostomia emaciata* Brusina, 1865. [Not *Turbonilla ambigua* Deshayes, 1864, Vol. 2, p. 571, pl. 21, figs, 20-21. Oligocene of Paris Basin which probably is a *Syrnola*].

ambigua Deshayes, 1864, Vol. 2, p. 571, pl. 21, figs. 20-21. Oligocene of Paris Basin. Probably is a *Pachysyrnola*. See also Cossmann and Lambert, 1884, p. 118, pl. 3, figs. 27a, b.

amoena Monterosato, 1878, *Odostomia* (*Turbonilla*), p. 34. New name for *Odostomia* (*Turbonilla*) *venusta* Monterosato, 1875. [Not *Turbonilla venusta* Issel, 1869, p. 175 and 334, pl. 3, fig. 34, (of Savigny). Recent, Red Sea]. Pliocene, Pleistocene and Recent, Mediterranean. (Southern Italy). [Not *Pyrgostylus amoenus* Cossmann and Peyrot, 1917 from the Miocene of France].

amoenus Cossmann and Peyrot, 1917, *Pyrgostylus*, p. 370, pl. 10, figs.5 and 8 (Atlas, 1919). Miocene of France and Germany. See also Hölzl, 1958, p. 197, pl. 18, fig. 9 and Anderson, 1964, p. 328, pl. 49, figs. 291 and 291a, b. Is a *Mormula*. As varietyis described: *Turbonilla* (*Mormula*) *amoena borealis* Voorthuysen, 1944. Miocene of the Netherlands (boring 154-159 m.). Also the material called *costellata* by von Koenen, 1882, is *P. amoenus*. [Not *amoena* Monterosato, 1878].

amplisuturata Sacco, 1892, *Pyrgostelis rufa* var... Tertiary of Italy. See *Pyramis crenata* Brown, 1827.

angasi Clessin, 1900, *Syrnola*, p. 67, pl. 16, fig. 1. New name for *gracillima* Smith, 1871, p. 734, pl. 75, fig. 17, from Whydah, Dahomey; Recent [*Obelsicus* (*Syrnola*)], [Not *Syrnola gracillima* A. Adams, 1860, Vol. 5, p. 405, no figure. Recent, Straits of Korea; nor *Pupasyrnola laevissima* var. *gracillima* Kuster Wendenburg, 1973, p. 73, pl. 4, fig. 65. Oligocene of Germany]. The species is listed here, because some authors report it, as was often done for syrnolids, as *Turbonilla*. The

name *angasi* is the correct one, although there exists *Turbonilla angasi* Tenison Woods, 1878 from Australia [non *angasi* Clessin], which, however has the earlier name *Turbonilla mariae* Tenison Woods, 1876. Various other names have been proposed: *Pyramidella* (*Syrnola*) *smithii* Tryon, 1886, p. 308, pl. 73, fig. 18, a name possibly preoccupied by Verrill's *Turbonilla smithii* 1881, p. 380. Recent, northwest Atlantic Ocean, which is not a *Turbonilla* but which might be a *Syrnola*; Bartsch noted this and invented the name *Turbonilla* (*Syrnola*) *tryoni* Bartsch, 1909, p. 71. See also Bush, 1909, p. 479. As late as 1928 Tomlin became aware of the preoccupation and coined the name *Syrnola whydahensis* Tomlin, 1928, p. 272.

angloplicatula Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 85. New name for *Chemnitzia plicatula* Brocchi, 1814, as identified by S. V. Wood, 1872, Crag Mollusca, 1st supplement, p. 61, pl. 7, fig. 3.

anglorufa Sacco, 1892, *Pyrgostelis*, Vol. 12, p. 3. New name for *Pyrgostelis rufa* Phillipi, 1836, as identified by S. V. Wood, Crag Mollusca. See *Pyramis crenata* Brown, 1827.

angresiana Vincent and Rutot, 1877, *Turbonilla*, p. 82, no figure. Nomen nudum ("espèce non decrite"). Tertiary of Belgium.

angusta Leach, 1852, *Turbonilla*, p. 166, no figure. Recent, Devon Gr. Britain. Is *Odostomia plicata* Montagu, 1803. [Not *angusta* Deshayes, 1864, Vol. 2, p. 575, Atlas, p. 20, figs. 13, 14, for which see *acicula* Lamarck, 1806, pl. 9, fig. 9, not turbonilled but probably *Pupasyrnola*; not *Turbonilla angusta* Gabb, 1873, p. 225, no figure. Oligocene of Santo Domingo and renamed *Turbonilla* (*Nisiturris*) *angustula* Pilsbry and Johnson, 1917, p. 176.

angusta Deshayes, 1864, *Turbonilla*, Vol. 2, p. 575; Atlas, pl. 20, figs. 13.14. A *Pupasyrnola* from the Tertiary of the Paris Basin. See *acicula* Lamarck, 1806, pl. 9, fig. 9.

anodula Fekih, 1969, *Turbonilla* (*Pyrgolidium*), p. 34, pl. 6, fig. 4. Pliocene of Tunisia.

antiqua Sacco, 1892, *Turbonilla costelloides* var..., Vol. 11, p. 78, pl. 2, fig. 66. See *scala* Eichwald, 1853. [Not *Turbonilla antiqua* Marshall, 1919, p. 228, pl. 15, fig. 10, which was renamed *T. hampdenensis* Allan, 1927, p. 29, footnote, New Zealand].

aonis Orbigny, 1852, *Turbonilla*, Vol. 3, p. 5, No, 70. Oligocene, Paris Basin, France. This is a *Pupasyrnola* with many synonyms: *Turbonilla deshaysi* Mayer, 1864, p. 175, pl. 9, fig.5. Oligocene of France; *Turbonilla laevissima* Bosquet,

1859, pl. 18, pl. 2, fig. 5. Oligocene of Zuid Limburg, The Netherlands; with a "variety" *Syrnola* (*Pupasyrnola*) *laevissima* var. *gracillima* "Boettger" Kuster Wendenburg, p. 73, pl 4, fig. 5. Middle Oligocene of Germany; *Syrnola (Pupasyrnola) transitans* Cossmann, 1921, p. 230. Middle Oligocene of Germany.

apicina "Sacco" Bush, 1909, *Strioturbonilla*, p. 480. *Lapsus calami* for *alpina*.

aptyx Boettger, 1906, *Turbonilla* (*Paraturbonilla*), p. 131, No. 455. For figure see Zilch, 1934, p. 242, pl. 12, fig. 38. Miocene of Kostej, Hungary. Type of *Paraturbonilla* Boettger, 1906.

aquensis Holzapfel, 1887, *Turbonilla*, p. 136, pl. 21, fig. 15. Upper Cretaceous (Greensand of Vaals, The Netherlands). Of highly doubtful affinity.

arcta Deshayes, 1864, *Turbonilla*, Vol. 2, p. 574, pl. 20, figs. 28-30, pl. 21, figs. 5,6. Eocene of Paris Basin, not turbonilid, but *Pupasyrnola*.

areolata de Rayneval, v. d. Hecke and Ponzi, 1854, *Chemnitzia*, p. 10 and 17, no figure. (non vidi). Not turbonillid but *Parthenia indistincta* Montagu, 1808, fide Cerrulli-Irelli, 1914, p. 261. [Not *Turbonilla areolata* Verill, 1873, p. 658, no figure, which might be the same as *T. interrupta* Totten, 1835, p. 352, fig. 7].

arnaudi Cossmann and Lambert, 1884, *Turbonilla*, p. 117, pl. 3, fig. 27. Oligocene of France. Not turbonillid, but *Acteopyramis*.

assimilans Smith, 1890, *Turbonilla*, p. 276, pl. 33, fig. 19. Recent, St. Helena.

astensiconvexa Sacco, 1892, *Turbonilla meneghinii*(?) var... p. 76, pl. 2, fig. 15. See *meneghinii* Libassi, 1856.

astensidelicata Sacco, 1892, *Turbonilla*, Vol. 11, p. 80, pl. 2, fig. 72. Pliocene (Astien) of Astigiana, northern Italy. A "variety" *acutina* Sacco, 1892, pl. 2, fig. 73 exixts.

astensipupoidea Sacco, 1892, *Turbonilla* (*Pyrgolidium*) *internodula* var.., Vol. 11, p. 84, pl. 2, figs. 84 bis. See *Chemnitzia internodula* S. V. Wood, 1848.

atlantica Locard, 1897, *Parthenina*, p. 444, pl. 19, figs. 16-18. Is turbonillid, close to *Exesilla*.

attenuata Jeffreys, 1884, *Odostomia,* p. 360, pl. 27, fig. 4. See *Odostomia* (*Turbonilla*) *micans*, Monterosato,1875.

aturensis Cossmann and Peyrot, 1917, *Turbonilla*, p. 371. Atlas, 1919, pl. 10, figs. 9-11. Miocene (Aquitanien of Dax), of southern France.

avitensis Cossmann and Peyrot, 1917, *Turbonilla*, p. 351. Atlas, 1919, pl. 9, figs. 82-83. Miocene of southern France.

azorensis Nordsieck, 1972, *Turbonilla* (*Chemnitzia*) *obliquata*... See *obliquata* Philippi, 1844.

banatica Boettger, 1901, *Turbonilla* (*Strioturbonilla*), p. 111, No. 354. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 242, pl. 12, fig. 36.

bandensis Kokay, 1966, *Turbonilla* (*Strioturbonilla*) p. 53 and 111, pl. 7, figs. 17-20, (German version). Miocene, Bakony Mountains, Hungary.

barleei Clark, 1851, *Chemnitzia*, p. 129. Recent. Not turbonillid, but *Rissoa eximia* Jeffreys, 1849, which is a *Chrysallida*.

basidepressa Sacco, 1892, *Strioturbonilla alpina* var..., Vol. 11, p. 95, pl. 2, fig. 71. See *Turbonilla* (*Pyrgisculus*) *scalaris* Philippi, 1836.

basidepressula Sacco, 1892, *Strioturbonilla alpina* var... Vol. 11, p. 95, fig. 111. See *Strioturbonilla alpina* Sacco, 1892.

basiglobosa Sacco, 1892, *Turbonilla delicata* var..., Vol. 11, p. 80, pl. 2, fig. 74. See *Odostomia* (*Turbonilla*) *delicata* Monterosato, 1874.

basisulcata Sacco, 1892, *Turbonilla*?, p. 79, pl. 2, fig. 71. Miocene (Tortonian) of Monte Gibbio, Italy.

bedoti Dautzenberg, 1912, *Turbonilla*, p. 63, pl. 2, figs. 39 and 40. Recent, Congo Estuary, Africa.

bellardii Seguenza, 1876, *Turbonilla* (*Pyrgostelis*) *rufa* var... See *Pyramis crenata* Brown, 1827.

benoisti Cossmann and Peyrot, 1917, *Turbonilla* (*Sulcoturbonilla*), p. 361, Atlas, 1919, pl. 10, figs. 77, 78. Miocene (Burdigalien of Saucats) of southern France. See also Cossmann, 1921, p. 283, pl. 6, figs. 38, 39.

beyrichi von Koenen, 1885, *Turbonilla*, p. 53, pl. 3, figs 10a-c. Paleocene of Denmark. See also Ravn, 1939, p. 64, pl. 2, figs. 11a-b.

bicingulata Brugnone, 1876, *Chemnitzia*, p. 211. (non vidi). Not turbonillid, but is a *Turbo interstinctus* Montagu, 1803, a *Chrysallida*. There exists a "variety": *Chemnitzia*, *bicingulata terebellum*, *ibid*, p. 211.

bilineata Seguenza, 1876, *Turbonilla*, p. 14, No. 535. Pliocene of southern Italy and Tunisia (Fekih, 1969, p. 41, pl. 7, figs. 8a-c. [*T.* (*Pyrgostelis*)]. There are several "varieties": *Pyrgostelis bilineata* var. *persulcata* Sacco, 1892, Vol. 12, p. 8, pl. 2, fig. 136 (in Vol. 11). Pliocene (Astien) of the Italian Piedmont. Also: *Pyrgostelis bilineata* var. *subalineata* Sacco, 1892, Vol. 12, p. 8, pl. 2, fig. 137, (in Vol. 11). Pliocene of the Itatlian Piedmont.

bimarginata Deshayes, 1824, *Auricula*, Vol. 2, p. 70, pl. 8, figs. 12, 13. Eocene of Abbecourt, France. Classified by Orbigny, 1850, Vol. 2, p. 301 and by Deshayes, 1864, p. 579 as *Turbonilla*.

bimonilitera Boettger, 1901, *Turbonilla* (*Pyrgostelis*) p. 113, No. 359. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 245, pl. 13, fig. 52, [*Turbonilla* (*Mormula*)].

biornata Boettger, 1906, *Turbonilla* (*Pyrgolampros*) p,. 127, No. 442. Miocene of Kostej, Hungary. See also Zilch, 1934, pl. 12, fig. 42 (holotype).

bollensis Fontannes, 1882, *Turbonilla*, Vol. 2, p. 134. Pliocene of southern France. Probably a *Pyrgolidium*.

bolli Semper, 1861, *Turbonilla*, p. 362. Oligocene of North Germany. See also Koch and Wiechmann,1872, p. 99, pl. 3, fig. 7.

bonellii Pavia, 1975, *Turbonilla* (*Pyrgiscus*), p. 162, pl. 11, figs. 24-27. New name for the specimen figured by Sacco, 1892, p. 6, pl. 2, fig. 131, (in Vol. 11), as *Turbonilla* (*Pyrgostelis*), which is not *Turbonilla* (*Pyrgolidium columnaris*) "Bonelli" Harmer, 1920, p. 575, pl. 49, fig. 40. *T. bonellii* Pavia, is from the Lower Pliocene of Italy.

borealis van Voorthuysen, 1944, *Turbonilla* (*Mormula*) *amoena* var..., p. 38, pl. 13, figs 15 and 17. See *amoenus* Cossmann and Peyrot, 1917. [Not *borealis* Kautsky, 1925].

borealis Kautsky, 1925, *Turbonilla* (*Strioturbonilla*) *densecostata* var..., p. 77, pl. 6, fig. 34. See *Pyramis crenata* Brown, 1827.

brachia Smith, 1890, *Turbonilla*, p. 276, pl. 23, fig. 21. Recent, St. Helena.

brevicostulata Sacco, 1892, *Turbonilla lactea* var...,Vol. 11, p. 75, pl. 2, fig. 54. See *Turbo lacteus* Linné, 1758.

brevior de Rayneval, v. d. Hecke and Ponzi, 1854, *Chemnitzia areolata* var..., p. 10 and 17 (non vidi). Not turbonilled, but according to most modern workers a *Chrysallida*. See *Turbo indistinctus* Montague, 1808. It should be noted that also Jeffreys, 1867, Vol. 4, p. 150, gave the name *brevior* to a "variety" of *indistinctus*.

brevis Reuss, 1867, *Turbonilla*, p. 57, pl. 7, fig. 9. Miocene of Wieliczka, Poland. Not turbonilled, but possibly *Actaeon pygmaea* Grateloup, 1838 which is a *Chrysallida* (see Aartsen. 1977, p. 54, fig. 11). Widespread in the Miocene of Europe, Pliocene of Gr. Britain and Recent, in the Mediterranean. Many synonyms. [Not *Turbonilla brevis* Seguenza, 1880, p. 265, no figure, see there; nor *Turbonilla humboldti* var. *brevis* Requien, 1848, p. 59, no figure, which is not turbonillid but *Actaeopyramis*; nor *Turbonilla* (*Pyrgiscus*) *brevis* Nomura,

1936, p. 85, pl. 9,figs. 67a, b. from Siogama Bay, Japan; nor *Turbonilla* (*Pyrgisculus*) *scalaris* var. *brevis* Cerulli-Irelli, 1914, p. 276, figs. 65a, b and 66 (see there); nor *Turbonilla brevis* Pritchard and Gatliff, 1900, p. 135, pl. 21, fig. 4, which is not a *Turbonilla* but a *Linopyrga*].

brevis Requien, 1848, *Turbonilla humboldti* var. *brevis*, p. 59, no figure. Recent, Corsica. Not turbonillid but *Actaeopyramis*.

brevis Seguenza, 1880, *Turbonilla*, p. 265, no figure. Pliocene (Astien) of southern Italy. There is a "variety" *obsoleta* Seguenza. *ibid*, also from the Pliocene of southern Italy.

brevis Cerulli-Irelli, 1914, *Turbonilla* (*Pyrgisculus*) *scalaris* var..., p. 276, figs 65a, b and 66. See *scalaris* Philippi, 1836.

briarti Cossmann, 1888, *Syrnola*, p. 96. New name for *Turbonilla parva* Briart and Cornet, 1873 from the Paleocene (Montien) of Belgium and not *Turbonilla parva* Deshayes, 1864, p. 572; Atlas, pl. 20, fig. 22-23. Eocene of France.

brocchii Bronn, 1831, *Melania*, p. 76, no. 408. See *Turbo plicatulus* Brocchi, 1814.

bulgarica Manolov, 1960, *Turbonilla* (*Strioturbonilla*), p. 304, pl. 2, figs. 10-20. Miocene of Bulgaria. Said to be close to *Turbonilla* (*Pyrgostelis*) *rufa* var. *paucidecussata* Sacco, 1892, p. 5, pl. 2, fig. 123 in Vol. 11.

buttoni Dautzenberg, 1912, *Turbonilla*, p. 64, pl. 2, figs. 41-42. Recent, Cotonou, West Africa in 25 m. [Not *Turbonilla* (*Strioturbonilla*)*buttoni* Dall and Bartsch, 1909, p. 43, pl. 3, figs. 4 and 4a. Recent, San Pedro to Todos Santos Bay, Lower California, which is a synonym of *Turbonilla* (*Strioturbonilla*) *stylina* Carpenter, 1864].

calameli Jousseaume, 1876, *Chemnitzia*, p. 273, no figure. Recent, Mediterranean. See *Turbonilla rosea* Monterosato, 1877 and *rosea* Maltzan, 1885.

calcarae Seguenza, 1876, *Turbonilla*, p. 14. Pliocene of Italy. Poorly described, but related to *lanceae* Libassi, 1859. Spelling should be corrected to *calcarai*.

campanellae Philippi, 1836, *Melania*, p. 156, pl. 9, fig. 5. By many workers considered a synonym of *Turbo lacteus* Linné, 1758. See there.

candida de Folin, 1870, *Turbonilla*, Fonds de la mer, Vol. 1, p. 267, pl. 28, fig. 13. Recent, Cape St. Anne, Senegal, West Africa. Probably not turbonillid and *Odostomia thielei* Dautzenberg, 1912, p. 55, pl. 2, figs. 24, 25 may be the same. [Not *Chemnitzia candida* A. Adams, 1855, p. 81. Recent, Japan (?); according to Smith, 1903, p. 386, *Turbonilla*

(*Chemnitzia*) kraussi, 1848 from South Africa is a synonym. Also see Kensley, 1973, p. 224, fig. 907 and Barnard, 1951, p. 82, p. 11, fig. 4; nor *Dunkeria candida* A. Adams, 1861, p. 301, no figure, which was changed to *Turbonilla* (*Pyrgisculus*) *candidissima* Dall and Bartsch, 1906, p. 342, pl. 17, fig. 3. Recent, Japan.]

canicularis Lamarck, 1806, *Melania*, p. 431. Eocene of France. Deshayes, 1824, Vol. 2, p. 109, pl. 13, figs. 16, 17, 26, 27, and Orbigny, 1852, Vol. 2, p. 342, list it as *Chemnitzia*. Possibly not pyramidellid.

canquei Dautzenberg, 1912, *Turbonilla*, p. 63, figs. 5 and 6. Recent, Bay of Libreville, west coast of Africa.

catherinae Glibert, 1949, *Turbonilla* (*Mormula*), p. 194, pl. 12, fig. 10. Miocene of the Loire Basin, France. See also Fekih, 1969, p. 41-42.

charltonensis Edwards m.s, *Turbonilla*, (in) Newton, 1891, p. 181. Woolwich Beds, Lower Eocene, Gr. Britain.

clarendonensis Edwards, m.s., *Turbonilla sulcata* var..., (in) Newton, 1891, p. 182. Probably the same as *Turbonilla subterranea* Wrigley, 1940. See there.

clavula Lovén, 1846, *Turbonilla*, p. 18. Recent, Scandinavia. Not turbonillid, but odostomiid. Made the type of *Cremula* Iredale, 1915, which was an unnecessary replacement name for *Liostomia* which is sufficiently different from *Leiostoma* Swainson.

coarctacta Dautzenberg, 1889, *Turbonilla*, p. 61, pl. 4, figs. 8a-e. Recent, Azores. Not *Turbonilla*, but *Ebalina*. See also Kobelt, 1905, p. 153, figs. 19-20 and Nordsieck, 1972, p. 121, pl. 5, fig. 10.

cocconii Fontannes, 1881, *Turbonilla*, Vol. 1, p. 131, pl. 8, figs. 1 and 2. See *Melania pallida* Philippi, 1836.

columnaris Bonelli m.s., Sismonda, 1842, *Melania*, p. 31, no figure. Italian Pliocene; also western Europe and Tunisia. See Sacco, 1892, p. 6, pl. 2, fig. 131 [*Turbonilla* (*Pyrgostelis*)]; Harmer, 1920, p. 575, pl. 49, fig. 40. [*Turbonilla* (*Pyrgolidium*)]; and Fekih, 1969, p. 40, pl. 7, fig. 6. [*Turbonilla* (*Pyrgostelis*)]. See also *bonelli* Pavia, 1975, and *excolumnaris* Sacco, 1892.

communis, A. Bell, 1871, *Chemnitzia*, p. 454. Nomen nudum. Pliocene of Butley, Gr. Britain. Valid author is Harmer, 1923, p. 843, pl. 64, fig. 26. [*Turbonilla* (*Pyrgostelis*)]. [Not *Chemnitzia communis* C. B. Adams, 1852, which is a *Chrysallida* from the Bay of Panama; nor *Pyrgostylus lanceae* var. *communis* Sacco, 1892, for which see *lanceae* Libassi, 1859.]

communis Sacco, 1892, *Pyrgostylus lanceae* var..., p. 9, pl. 2, fig. 139 (in Vol. 11). See *lanceae* Libassi, 1859.

compressa Jeffreys, 1884, *Odostomia* (*Turbonilla*), p. 360, pl. 27, fig 5. Recent, Mediterranean. See also Tryon, 1886, p. 334, pl. 75, fig. 88, and Kobelt, 1905, 152, pl. 72, fig. 12. Made the type of *Cylindroturbonilla* by Nordsieck, 1972, p. 126, pl. 5, fig. 28.

compressicosta Sandberger, 1861, p. 174. Middle Oligocene (Rupelien) of Weinheim, Germany. Figure in Sandberger, 1863, pl. 35, fig. 25. See also Kuster-Wendenburg, 1973, p. 73, pl. 4, figs 66-68 and Cossmann, 1921, p. 288 [*Turbonilla* (*Pyrgolampros*)]. Two "varieties" exist: *Turbonilla* (*Pyrgolampros*) *compressicosta* var. *gracilior* Kuster-Wendenburg, 1973, pl. 4, fig. 68 (in legend spelled *gracillior*!) and *Turbonilla compressicosta major* Kuster-Wendenburg, 1973, pl, 4, fig. 67, both from the German Oligocene.

compta Deshayes, 1864, *Turbonilla*, p. 565, Atlas, pl. 23, fig. 26, and 27, Eocene of Verneuil, France. See also Strausz, 1966, p. 120, pl. 8, fig. 4, (*Turbonilla*) and Gougerot, 1967, p. 100, fig. 14. Eocene of France, Belgium, Hungary. A synonym is *Turbonilla obliquata* Deshayes, 1864, p. 565, Atlas, p. 21, figs. 24, 25. Eocene of Caumont, France. [Not *Turbonilla compta* A. Adams, 1861, p. 298, no figure. Recent, Hulu Shan Bay, China].

concinna Pantanelli, 1884, *Turbonilla*, p. 26-29, (non vidi). Pliocene of Italy. [Not *Chemnitzia concinna* A. Adams, 1855, p. 81, no figure. Recent, Bohol, Philippines.]

conica Briart and Cornet, 1873, *Turbonilla*, p. 16, figs. 12a-c. Paleocene (Montien) of Belgium. Not turbonillid, but is *Pachysyrnola* (fide) Cossmann, 1921, p. 231 and Glibert, 1973, p. 88. See also Cossmann, 1915, p. 49, pl. 3, figs. 75 and 76. [Not *Turbonilla* (*Pyrgolidium*) *internodula* var. *conica* Harmer, 1920, (see there) nor *Turbonilla conica* Laseron, 1951, p. 235, figs. 148, 149. Recent, Australia; nor *Turbonilla conica* Szöts, 1953, p. 175, pl. 4, fig. 4, from the Eocene of Hungary.

conica Harmer, 1920, *Turbonilla* (*Pyrgolidium*) *internodula* var. *conica*, p. 574, pl. 49, figs. 37, 38. Pliocene of Gr. Britain: see *internodula* S. V. Wood, 1848.

conica Szöts, 1953, *Turbonilla*, p. 175, pl. 4, fig. 4. Eocene of Hungary.

conicina Sacco, 1892, *Turbonilla pusilla* var..., Vol. 11, p. 83, fig. 80 (misspelled *pupilla*). See *Chemnitzia pusilla* Philippi, 1844.

conicoidea Sacco, 1892, *Pyrgolidium internodulum* var..., Vol. 11, p. 84. See *internodula* S. V. Wood, 1848.

conicomutinensis Sacco, 1892, *Sulcoturbonilla turricula* var..., Vol.11, p. 92, pl. 2, fig. 107. See *Tornatella turricula* Eichwald, 1853.

conicoparvula Sacco, 1892, *Turbonilla lactea* var..., Vol. 11, p. 75, pl. 2, fig. 57. See *Turbo lacteus* Linné, 1758.

conjugens Briart and Cornet, 1873, *Turbonilla*, p. 15, pl. 6, figs. 5a,b. Paleocene (Montien) of Belgium. Not turbonillid but *Megastomia* (See Glibert, 1973, p. 85, pl. 10, fig. 10.)

continuicosta Cossmann and Peyrot, 1917, *Turbonilla* (*Pyrgolidium*), p. 362, Atlas, 1919, pl. 9, figs. 95-97. Miocene (Aquitanien) of Merignac, France. See also Cossman, 1921, p. 285, pl. 6, figs. 61-62.

contorta Seguenza, 1876, *Turbonilla* (*Pyrgulina*), p. 92, no figure. Not turbonillid. This probably is *P. interstincta* (Montagu, 1803).

conulus Koch und Wiechmann, 1872, *Turbonilla*, p. 98, pl. 3, fig. 5. Miocene of Doberg, Germany. Probably Speyer, 1871, (p. 60, pl. 10, figs. 21-22), should be considered the author, but he gives *Turbonilla conulus* Koch (in litt.). Not turbonillid and most likely a *Pachysyrnola.*

convexa Sacco, 1892, *Pyrgostylus lanceae:* var. ..Vol. 12, p. 9, pl. 2, Fig. 140, (in Vol. II). See *lanceae* Libassi, 1859. [Not *convexa* Fekih, 1969; see there].

convexa Fekih, 1969, *Turbonilla campanellae* var..., p. 31, pl. 5, fig. 9. Pliocene of Tunisia. See *Turbo lacteus*, Linné, 1758.

convexulosulcata Sacco, 1892, *Turbonilla lactea* var..., Vol. 11, p. 74, pl. 2, fig. 50. See *Turbo lacteus* Linné, 1758.

corbis Conti, 1864, *Chemnitzia*, p. 30, non vidi. See *Turbonilla rosea* Monterosato, 1877, or Maltzan, 1885.

corti Dautzenberg and Fischer, 1897, *Turbonilla*, p. 41, no figure. Recent, Azores at 1360 m. For figure see Kobelt, 1906, Vol. IV, p. 10, pl. c, fig. 6, or Nordsieck, 1972, p. 123.

costaria S. V. Wood, 1848, *Chemnitzia*, p. 80, pl. 9, figs. 3, 3a. Pliocene of Gr. Britain. See *Turbo striatulus*, Linné, 1766.

costata J. Sowerby, 1819, *Melania*, p. 71, pl. 241, fig. 2. Upper Eocene of Great Britain. See also Morris, 1854, p. 243, and Newton, 1891, p. 181 (*Turbonilla*). It is possible that Wrigley, 1944, has renamed this species.

costellata Grateloup, 1827, *Turbonilla*, p. 107, No. 79. Miocene of Dax, southern France and western and middle Europe. Many authors have figured specimens labelled by this name: Hoernes, 1875, p. 362, pl. 10, fig. 12; von Koenen, 1882, p. 251, pl. 6, fig. 9; Dollfus, Cotter, and Gomez, 1903-04,

pl. 34, figs. 6a, b; Ravn, 1907, p. 297, pl. 3, fig. 12; Cossmann and Peyrot, 1917, p. 349, pl. 9, figs. 68-70; Sorgenfrei, 1958, p. 325, pl. 70, fig. 242. There are also many different names for species which appear to be quite close, although none of these has been proven to be synonymous. Some are: *Turbonilla acutorecta* Sacco, 1892, Vol. 11, p. 79. New name for the specimens described as *costellata* by Hoernes, 1875, from the Vienna Basin; *Turbonilla falloti* Cossmann and Peyrot, 1917, p. 347, Atlas, 1919, pl. 9, figs. 76-78, from the Aquitanien of Merignac, France; *Turbonilla girondica* Benoist 1884-85 (in) du Boucher, p. 176. Miocene of southern France. This may be a nomen nudum. See also Degrange-Touzin, 1895, p. 399; *Turbonilla pliocostellatoides* Sacco, 1892, Vol. 11, p. 77, pl. 2, fig. 64. Pliocene (Astigiana). See also Pavia, 1975, p. 165, pl. 12, figs. 1, 4, 5, [as *Turbonilla* (*Strioturbonilla*)]; A proven synonym is *Turbonilla subcostellata* Orbigny, 1852, a replacement name introduced for *costellata* Grateloup, 1840. Orbigny was mistaken in his belief that *costellata* Dujardin, 1837, had priority over Grateloup's name. [Not *Tornatella costellata* Dujardin, 1837. See there; nor *Turbonilla costellata* Edwards m.s. (in) Newton, 1891 for the Eocene (Barton Bed) of Great Britain].

costellata Dujardin, 1837, *Tornatella*, p. 282, pl. 19, fig. 25. Miocene of western Europe and Russia. See *Tornatella turricula* Eichwald, 1853. [Not *Turbonilla costellata* Edwards m.s. (in) Newton, 1891. See there].

costellata Edwards m.s. (in) Newton, 1891, *Turbonilla*, p. 181, from the Eocene (Barton Beds) of Great Britain. [Not *costellata* Grateloup, 1827; nor *costellata* Dujardin, 1937].

costellatoides Sacco, 1892, *Turbonilla*, Vol. 11, p. 78, pl. 2, fig. 65. See *Eulima scala* Eichwald, 1853.

costellatosulcata Sacco, 1892, *Turbonilla*?, Vol. 11, p. 79, pl. 2, fig. 70. Italian Tertiary.

costifera Smith, 1871, *Turbonilla*, p. 735, pl. 75, fig. 18. Recent, Whydah, Dahomey, West Africa.

costulata Risso, 1826, Turbonilla, p. 224, fig. 72. Recent, Mediterranean. It is strange that no good figures of this species are available because the species was designated as type for *Turbonilla* by Hermannsen, 1852. This assignment was adopted by Palmer (1958, p. 251) and accepted by Corgan (1967, p. 200-203). *Turbonilla costulata* was listed as one of four species by Risso, 1826, when he defined *Turbonilla*. Of these *Turbonilla humboldti* cannot now be

considered to belong to *Turbonilla* which leaves only *costulata*, *gracilis* or *plicatula* as possible candidates. As far as I know *gracilis* was never considered or proposed as type, but Hermannsen in 1852 chose *T. costulata* as type. Apparently one of the first modern workers to state that *costulata* is the type of *Turbonilla* was Winckworth (1932, p. 227). Later Wrigley, 1940, p. 13 gave *costulata* as type but cited Monterosato, 1884 as designator. It is possible that there is a problem concerning the true identity of that species. If it could be demonstrated that *costulata* Risso, 1826, belongs to the group of species of *lactea*, *campanellae*, or *elegantissima* several of the earlier type assignments could be correct. However, recently Wise (1996) preferred the later assignment of Dall and Bartsch of *T. typica* as type, which is a replacement name for *T. plicatula* Risso, 1826 (non Brocchi, 1814) for *Turbonilla*.

crassecostata Doderlein, 1862, p. 17, *Turbonilla elegantissima* var... Miocene of Italy. Note spelling with an "e", not "i". See *Turbo lacteus* Linné, 1758. Also stated to resemble *Turbonilla costellatoides* var. *dertocolligens* Sacco, 1892, for which see *scala* Eichwald, 1853. [Not *Turbonilla crassicostata* "A. Adams" Clessin, 1900, p. 156, pl. 26, fig. 6. Recent, Hong Kong, type in: "mus. Berol" (Berlin). Note spelling with "i" not "e".]

crassicosta Rolle, 1862 (?) *Chemnitzia*, (non vidi). Miocene of Austria. Mentioned by Hilber, 1878, p. 524. There also exists a "variety": *Chemnitzia crassicosta curta* Rolle.

crenata Brown, 1827, *Pyramis*, p. 14, pl. 9, fig. 53. Recent, Gr. Britain. This is the accepted name for the species later named *Melania rufa* Philippi, 1836, which is listed by almost all authors on European molluscs as *Turbonilla*, *Pyrgiscus*, *Dunkeria*, *Pyrgostelis*, *Pyrgisculus* and still others. I cannot demonstrate that the following taxa are synonymous with *crenata*, but that in my opinion is very plausible. *Turbonilla rufa* var. *adensecostata* Sacco, 1892, Vol. 12, p. 4. New name for Wood's (1848) *densecostata* from the Pliocene of Gr. Britain; *Turbonilla rufa* var. *albida* Locard, 1897-98, p. 441. Recent, Atlantic Ocean; *Turbonilla* (*Pyrgostelis*) *albina* "Monterosato" Coen, 1933, p. 54. Recent, Mediterranean; *Pyrgostelis anglorufa* Sacco, 1892, Vol. 12, p. 3. New name for *Turbonilla rufa* as reported by S. V. Wood's, Crag Mollusca, Gr. Britain; *Turbonilla rufa* var. *attenuata* Locard, 1897-98, p. 441. Recent, Atlantic Ocean; *Turbonilla* (*Pyrgostelis*) *rufa*

var. *bellardii* Seguenza, 1876, p. 14. Tertiary of southern Italy. Figure in Sacco, 1892, Vol. 12, p. 5, pl. 2, fig. 125 (in Vol. 11), see also Fekih, 1969, pl. 6, fig. 9. Pliocene of Tunisia; *Turbonilla* (*Strioturbonilla) densecostata* var. *borealis* Kautsky, 1925, p. 77, pl. 6, fig. 34. Miocene of Hemmoor, Germany. See also Anderson, 1964, p. 326, pl. 48, fig. 288; *Turbonilla cylindrella* S. V. Wood, 1842. Nomen nudum. Pliocene of Sutton, Gr. Britain. Cited by Bronn, 1848, p. 1327 and according to S. V. Wood, 1848, p. 83, a synonym of *T. densecostata* Philippi, 1844; *T.* (?) *danmoniensis* Leach. No further data, (non vidi); *Turbonilla decussata* Bonelli, 1827, No. 3003, no data. See also Sacco, 1892, Vol. 12, p. 4, and Cerulli-Irelli, 1914, p. 272, pl. 23, fig. 48 as *Turbonilla forma* C, and Fekih, 1969, p. 38, pl. 7, fig. 4; *Chemnitzia densecostata* Philippi, 1844, p. 137, p. 224, fig. 9. Recent, Tarente, Italy, which is not *Mormula densecostata* Fekih, 1969. See there and also Kobelt, 1905, p. 158, figs. 28, 29, as *Turbonilla* (*Pyrgostelis*) and Cerulli-Irelli, 1914, p. 270, pl. 23, figs. 41 and 43, and Harmer, 1920, p. 567, pl. 49, figs. 24, 25, as *Turbonilla* (*Pyrgostelis*) and Fekih, 1969, p. 37, pl. 7, fig. 1. Pliocene of Tunisia and Pavia, 1975, p. 114, pl. 11, fig. 15 as *Turbonilla* (*Pyrgiscus*); *Turbonilla* (*Pyrgostelis*) *rufa* var. *depressecostata* Cerulli-Irelli, 1914, p. 272, pl. 23, figs. 51-52. Pliocene of Monte Mario, Italy; *Pyrgostelis rufa* var. *dertodecussata* Sacco, 1892, Vol. 12, p. 4, pl. 2, fig. 119, (in Vol. 11). Miocene of Stazzano, Italy; *Pyrgostelis rufa* var. *exdensecostata* Sacco, 1892, Vol. 12, p. 4, pl. 2, fig. 118, (In Vol. 11). Miocene of Monte Gibbio, Italy. Also see Fekih, 1969, p. 37, pl. 7, fig. 2; *Odostomia* (*Turbonilla*) *rufa* var. *exigua* Monterosato, 1878, p. 34. Recent, Venice; *Chemnitzia fasciata* Requien, 1848, p. 59. Recent, Corsica. See also Jeffreys, 1867, Vol. 4, p. 163 and Bucquoy, Dautzenberg, and Dollfus, 1883, p. 184; *Turritella fulvocincta* Thompson, 1840. Recent, Ireland, which could be, but probably is not, the same as *crenata* Brown, 1827. Several authors consider *fulvocincta* Jeffreys, 1884 as synonym of *interrupta* Totten, 1835,and different from *fulvocincta* Thompson. See also Dall, 1889; *Pyrgostelis gallicula* Sacco, 1892, Vol. 12, p. 3, a name invented by Sacco, 1892, for the material reported by Bucquoy, Dautzenberg and Dollfus, 1883, p. 183, pl. 21, fig. 11, as *Turbonilla densecostata* from the Mediterranean which is the same as *T.* (*Pyrgostelis*) *rufa* var. E in Cerulli-Irelli, 1914, P. 272; *Pyrgostelis rufa* var. *gigantoastensis* Sacco,

1892, Vol. 12, p. 6, pl. 2, fig. 127 (in Vol.11). Pliocene of the Italian Piedmont. See also Fekih, 1969, p. 39, pl. 7. Pliocene of Tunisia; For *hibernica* Leach, no data, non vidi, See Jeffreys, 1867, p. 164; Sacco, 1892, created the name *Pyrgostelis rufa jeffreysi* (Vol. 12, p. 3) for the specimens figured as *Turbonilla rufa* byJeffreys, 1869, (Brit. Conchol., Vol. 5, p. 76, fig. 1 (*Odostomia*); *ligustica* Sacco, 1892, *Pyrgostelis rufa* var..., Vol. 12, p. 6, pl. 2, fig. 18 (in Vol. 11). Pliocene of the Italian Piedmont. See also Almera and Bofill, 1898, p. 55; *minor* Pallary, 1900, *Turbonilla* (*Pyrgostelis*) *rufa*, p. 343. Recent off Oran, Algeria in 30 m.; *minor* Locard, 1897-98, *Turbonilla rufa* var..., p. 44. Recent, Atlantic Ocean; *miopersulcata* Sacco, 1892, *Pyrgostelis rufa*..., Vol. 12, p. 4, pl. 2, fig. 120 (in Vol. 11). Miocene of Monte Gibbio, Italy; *multidecussata* Sacco, 1892, *Pyrgostelis rufa* var..., Vol. 12, p. 5, pl. 2, fig. 124 (in Vol. 11). Pliocene of the Italian Piedmont; *paucidecussata* Sacco, 1892, *Pyrgostelis rufa*..., Vol. 12, p. 5, pl. 12, fig. 123 (in Vol. 11). Pliocene of the Italian Piedmont. See also Fekih, 1969, p. 40, pl. 7, fig. 12. Pliocene of Tunisia; *perventricosa* Fekih, 1969, *Turbonilla* (*Pyrgostelis*), p. 40, pl. 7, fig. 12. Pliocene of Tunisia; *plioastensis* Sacco, 1892, *Strioturbonilla densecostata*..., Vol. 11, p. 96, pl. 2, fig. 115. Considered by Fekih, 1969 a full species; *praecedens* Sacco, 1892, *Pyrgostylus rufa*..., Vol. 11, pl. 2, fig. 117. Miocene of Monte Gibbio;Later renamed *Turbonilla* (*Pyrgostelis*) *vidali* Cossmann 1921, pl. 6, figs. 71-72, for the specimens from the Miocene of Catalonia; *scalaroides* Risso, 1826, fig. 41. Recent, (non vidi), fide Tryon, 1886, p. 326 (*Turbonilla*); *simillimus* Montagu, 1803, *Turbo*, p. 136, no figure. See also Jeffreys, 1867, Vol. 4, p. 164. See also Philippi, 1844, Vol. II, p. 137, pl. 24, fig. 11, (*Chemnitzia*), cited as a synonym of *scalaris* Philippi, and Wood, 1848, p. 85, pl. 9, figs. 16, 16a *Odostomia*. Later Wood (1882) removed his material from *crenata* and redescribed it as *Nodostoma ornata* (Wood, 1882, p. 8); *spectabilis* Monterosato, 1884, *Pyrgostelis*, p. 90. Recent, Mediterranean; *subalpina* Sacco, 1892, *Strioturbonilla densecostata* var..., Vol. 11, p. 96, pl. 2, fig. 16. Pliocene of the Italian Piedmont. Also in Fekih, 1969, p. 34, pl. 6, fig. 3. Pliocene of Tunisia; *subangulata* Locard, 1897-98, *Turbonilla rufa* var..., p. 44. Recent, Atlantic Ocean; *superstructa* Boettger, 1906, *Turbonilla* (*Strioturbonilla*) *densecostata* var..., p. 132, No. 437. Miocene of Kostej, Hungary, fide Zilch, 1934, p. 242,

pl. 12, fig. 35; *ventricosa* Cerulli-Irelli, 1914, p. 273, pl. 23, fig. 53. Pliocene of Monte Mario, Italy; *vidali* Cossman, 1921, *Turbonilla* (*Pyrgostelis*) p. 291, pl. 6, figs 71-72. New name for *Pyrgostelis rufa praecedens* Sacco, 1892, from the Miocene of Catalonia.

crispata Seguenza, 1876, *Turbonilla* (*Pyrgulina*), p. 92. Not turbonillid. Pliocene of Italy.

crowfooti Harmer, 1923, *Turbonilla*, Vol. 2, part 3, p. 841, pl. 64, fig. 28. Pliocene of Beccles, Gr. Britain.

curta von Koenen, 1891, *Turbonilla*, p. 625, pl. 43, figs. 5a, b and 6a, b. Lower of Oligocene of Germany. Not turbonillid but *Syrnola*. [Not *Turbonilla curta* Dall, 1889, p. 337, fig. 26, fig. 7c. Recent, Yucatan Strait at 640 fms.]

curvicostata S. V. Wood, 1848, *Chemnitzia*, p. 79, pl. 10, figs. 1, 1a; not turbonillid but is *Turbo indistinctus* Montagu, 1808, but reported as *Turbonilla* by Dollfus, Cotter and Gomez, 1903-04, pl. 34, figs. 7a, 7b.

cylindrata Marshall, 1893, *Odostomia pusilla* var..., p. 255. See *Chemnitzia pusilla* Philippi, 1844.

cylindrella S. V. Wood, 1842, *Turbonilla*, p. 536. Nomen nudum. Pliocene of Gr. Britain. [Not *Turbonilla cylindrella* Edward's m.s. (in) Newton, 1891. See there.]

cylindrella Edwards m.s. (in) Newton, 1891, p. 182. London Clay, Lower Eocene of Great Britain.

cylindroides DeGrange-Touzin, 1895, *Turbonilla*, p. 400, pl. 9, figs. 5-5a. Miocene of southern France.

d'anconiana Coppi, 1876, *Turbonilla*, p. 200, no figure. Pliocene of Monte Gibbio, Italy, Said to be close to *Turbonilla costellata* Grateloup, 1827.

dautzenbergi Glibert, 1949, *Turbonilla* (*Pyrgolampros*) p. 192, pl. 11, fig. 6. Miocene of France and The Netherlands. See also *turonensis* Peyrot, 1938.

debeyi Holzapfel, 1887, *Turbonilla*, p. 136, pl. 14, fig. 18. Upper Cretaceous of West Germany. Of rather doubtful affinity.

decussata Bonelli, 1826, *Turbonilla*, No. 3003 (non vidi). See *crenata* Brown, 1827. [Not *Mormula decussata* Kuroda, 1928. Recent, Japan, nor *Turbonilla decussata* Pease, 1861, p. 438, which is *cornelliana* Newcomb, 1870, from the Pacific. Also not *Melania decussata* Deshayes, 1824. See there.]

decussata Deshayes, 1824, *Melania*, p. 112, pl. 14, figs. 9, 10. Eocene, Basin of Paris, France. Placed by Orbigny, 1850, Vol. 2, p. 413 in *Chemnitzia*.

degrangei Cossmann and Peyrot, 1917, *Turbonilla* (*Pyrgolidium*) p. 365, Atlas, 1919, pl. 10, figs. 1,2. New name for *Turbonilla parva* Degrange-Touzin, 1895, p. 399, pl. 9, figs 3, 3a. Miocene (Helvetien) of France; nec *Turbonilla parva* Briart and Cornet, 1873 (see there). See also Cossman, 1921, p. 285, pl. 6, figs. 59, 60.

delicata Monterosato, 1874, p. 267, *Odostomia* (*Turbonilla*). New name for *Chemnitzia gracilis* Philippi, 1844 (not Brocchi, 1814). Made the type of *Graciliturbonilla* by Nordsieck, 1972. For figures see Tryon, 1886, p. 823, pl. 75, fig. 81 and Kobelt, 1905, pl. 73, fig. 3, pl. 74, figs. 5, 6 and Cerulli-Irelli, 1914, p. 268, pl. 23, figs. 32, 33. Also Harmer, 1923, p. 841, pl. 64, fig. 22. Recent, Atlantic off Africa, Mediterranean and Black Sea. Pliocene of Great Britain. Synonyms and varieties are: *acutissima* Monterosato, 1844, *Turbonilla*, p. 92. Recent, Mediterranean; *basiglobosa* Sacco, 1892, *Turbonilla delicata* var..., Vol. 11, p. 80, pl. 2, fig. 74. Pliocene of Italy; *gracilis* Philippi, 1844, *Chemnitzia*, p. 137 and 224, pl. 24, fig. 11. Recent, Sicily. [Not *Turbo gracilis* Brocchi, 1814. (see there)]; *hamata* Nordsieck, 1972, *Turbonilla* (*Graciliturbonilla*) p. 125, pl. 5, figs 23-24. Recent, Ibiza, Mediterranean. Later Nordsieck, 1972, p. 244. (Archiv. f. Moll. k) gives it as a form of *delicata*, not as nov. sp.; Stozzi de Stefani and Pantanelli, 1878, *Turbonilla*, non vidi. Sacco, 1892 cites it as very close to the "variety" *basiglobosa*; *superata* Nordsieck, 1972, *Turbonilla* (*Graciliturbonilla*) *hamata* forma *superata*. Recent, Ibiza, Mediterranean.

delpretii Sulliotti, 1889, *Turbonilla*, p. 68, no figure. Recent, off Viareggio, Italy. Not turbonillid. Sulliotti mentions a color form *flavescens* (*ibid*). Modern authors classify *delpretii* as *Chrysallida indistincta* Montagu, 1808.

densecostata Philippi, 1844, *Chemnitzia*, p. 137 and 224, pl. 24, fig. 9. [Not *densecostata* Fekih, 1967]. See *crenata* Brown, 1927.

densecostata Fekih, 1969, *Mormula*, p. 42, pl. 7, fig. 14. Pliocene of Tunisia. Described from a single fragmental shell! [Not *densecostata* Philippi, 1844].

denseplicata von Koenen, 1882, *Turbonilla*, p. 259, pl. 6, figs. 11a, b. Miocene of Stolpe, Germany. Also from Denmark and The Netherlands. See Ravn, 1907, p. 297 and Gripp, 1917, p. 22.

densestriata Brusina, 1866, *Turbonilla*, p. 69. *Lapsus calami* for *densecostata* Philippi, 1844.

dentata Nordsieck, 1972, Dunkeria scalaris..., p. 244, fig. 66. See *scalaris* Philippi, 1836. [Not *Turbonilla dentata* Speyer, 1871].

dentata Speyer, 1871, *Turbonilla*, pl. 11, fig. 5. Upper Oligocene of Germany; described from two fragmental shells. Probable synonyms are: *Turbonilla laticosta* von Koenen, 1891, Vol. 10, p. 629, pl. 43, fig. 15a, b, 16a, b, and 17a, b. Sacco, 1892, selected fig. 15 as type. Glibert and Heinzelin, 1954, p. 361, classify it as *Turbonilla* (*Pyrgolampros*). Oligocene of Belgium and Germany; *Turbonilla laticosta multicostula* Sacco, 1892,Vol. 11, p. 79, no figure. Sacco selected fig. 17 of Koenan's paper of *Turbonilla laticosta* as type of *multicostula* and named it on the basis of that figure.

depressecostata Cerulli-Irelli, 1914, *Turbonilla* (*Pyrgostelis*) *rufa* var... p. 272, pl. 23, figs. 51-52. See *crenata* Brown, 1827.

dertocolligens Sacco, 1892, *Turbonilla costellatoides* var..., p. 78, pl. 2, fig. 67. See *scala* Eichwald, 1853.

dertodecussata Sacco, 1892, *Pyrgostelis rufa* var..., Vol. 12, p. 4, pl. 2, fig. 119 (in Vol. 11). See *crenata* Brown, 1827.

dertogracilis Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 90, pl. 2, fig.10. Miocene-Lower Pliocene of the Italian Piedmont. See also Caprotti, 1974, p. 36 [*Turbonilla* (*Pyrgolampros*)].

dertonensis Sacco, 1892, *Pyrgolampros paucistriatus* var... See *paucistriata* Jeffreys, 1873.

deshayesi Mayer, 1864, *Turbonilla*, p. 175, pl. 9, fig. 5. See *aonis* Orbigny, 1852. [Not *Turbonilla deshayesi* Briart and Cornet, 1873 which was described as *Turbonilla* but is an *Odostomia*; see there].

deshayesi Briart and Cornet, 1873, *Turbonilla*, 2nd part, p. 13, pl. 6, fig. 8. Palaeocene of Belgium,Lower Eocene of France; see Cossmann and Pissarro 1910-13, pl. 6, fig. 44-1; pl. 63, fig, 44-1 and 45-1, and Gougerot 1969, p. 30, fig. 30.

dewalquei Holzapfel, 1887, *Chemnnitzia*, Upper Cretaceous (Vaalser, Greensand) of The Netherlands. See also Van der Weyden, 1942, p. 34, pl. 2, fig. 5. Of doubtful affinity.

diastomoides Cossmann and Peyrot, 1917, *Pyrgostylus*, p. 372, Atlas, 1919, pl. 10, fig. 14-19, 67. Miocene of Leognan, France.

digenes Dautzenberg and Fischer, 1896, *Turbonilla*, p. 470, pl. 20, fig. 6. Recent, Azores at 1385 m. Not turbonillid, but *Eulimella*. Probably the same as *Eulimella nana* Locard, 1897, p. 431, pl. 19, figs. 9-10, off Morocco in 1900 m. See also Kobelt, 1905, p. 168, pl. 74, figs, 23, 24, and Nordsieck, 1972, p. 120, pl. 5 fig. 6.

digitalis Sandberger, 1859, *Turbonilla*, pl. 15, figs. 5, 5b, p. 173. Middle Oligocene of Waldböckelheim, Germany.

dimidiata Doderlein, no data, non vidi. Fide Seguenza, 1880, p. 112, (*Turbonilla*). Miocene of southern Italy.

dimidiolaevis Sacco, 1892, *Pyrgolampros ligusticoterebralis* var..., Vol. 11, p. 89, pl. 2, fig. 97. Pliocene of the Italian Piedmont. See *ligusticoterebralis* Sacco, 1892.

discrepans Harmer, 1923, *Turbonilla*, p. 892, pl. 64, fig. 24. Pliocene of Great Britain. New name for some misidentified material of *Chemnitzia plicatula*.

dollfusi Peyrot, 1938, *Pyrgostylus*, p. 70, no figure. Miocene of France.

dubia Bronn, 1834-37, *Turbonilla*, p. 175, pl. 11, fig. 15. No data, non vidi. See Bronn, 1851, (3rd edit.), p. 76, pl. 11, fig. 15. Probably not turbonillid. [Not *Turbonilla gracilis* var. *dubia* Seguenza, 1880, (see there)]; nor *Chemnitzia dubia* Orbigny, 1842, p. 226, Atlas (1853), pl. 17, figs. 4-6, Rio de Janeiro, Recent; nor *Auricula dubia* Grateloup, 1827, p. 105. Miocene of France, which is a *Pupasyrnola*; nor *Elusa* (?) *dubia* Schepman, 1909, p. 224, pl. 17, fig. 9, which probably is *Elusa castanea* A. Adams, 1863, now *Tropeas castanea*. See Habe, 1964, p. 130.

dubia Seguenza, 1880, *Turbonilla gracilis* var..., p. 112, p. 11, fig. 34. See *gracilis* Brocchi, 1814.

dubiosa Harmer, 1920, *Turbonilla*, p. 565, pl. 49, fig. 21. Pliocene of St. Erth, Gr. Britain. By earlier workers sometimes identified as *Turbonilla costellata* Grateloup, 1827.

dujardini Cossmann, 1921, *Turbonilla*, p. 280. Miocene of France. See also Peyrot, 1938, p. 64, pl. 3, figs. 2 and 5. Often incorrectly identified as *Turbonilla gracilis* Brocchi.

ecostata Harmer, 1920, *Turbonilla* (*Pyrgiscus*) *similis* var..., p. 570, pl. 49, figs. 31-32. See *Chemnitzia filosa* S. V. Wood, 1848.

edegemensis Glibert, 1952, *Turbonilla miostriatula* forma..., p. 58, fig. 4, fig. 13. See *miostriatula* Sacco, 1892.

edwardsi Glibert, 1938, *Turbonilla* (*Turbonilla*), p. 48, fig. 21, pl. 1, fig. 19. New name for *Turbonilla costellata* Edwards m.s. Holotype No. 162, Inst. Roy. Scienc. Nat. Belge; paratype No. 63 from Barton (Eocene) Gr. Britain. See also Glibert, 1962, p. 18.

elata von Koenen, 1891, *Turbonilla* ?, p. 631, pl. 43, figs. 22a, b. Lower Oligocene of Lattorf, Germany.

elatolanceaoides Fekih, 1969, *Pyrgostylus*, p. 45, pl. 9, fig. 2. Pliocene of Tunisia. Strictly the name is misspelled by Fekih, it should be *elatolanceacoides*.

elegans S. V. Wood, 1842, *Turbonilla*, p. 536. Pliocene of Sutton. Gr. Britain. nomen nudum. [Not *Chemnitzia elegans* Orbigny, 1842, p. 223, Atlas (1853), pl. 11, figs. 25-27. Recent, Cuba; nor *Turbonilla elegans* Verrill, 1872, p. 282, pl. 6, fig. 4. Recent, off New England, which was renamed *Turbonilla elegantula* Verrill, 1882, p. 538, fig. 3; nor *Turbonilla elegans* Seguenza, 1876, p. 14. See there].

elegans Seguenza, 1876, *Turbonilla*, p. 14, no figure. Italian Tertiary. See *Turbo lacteus* Linné, 1758.

elegantior S. V. Wood, 1872, *Chemnitzia*, p. 60. Pliocene of Gr. Britain. See *Turbo lacteus* Linné, 1758.

elegantissima Montagu, 1803, *Turbo*, p. 298, pl. 10, fig. 3. See *Turbo lacteus* Linné, 1958. [Not *Pyrgostylus elegantissimus* Fekih, 1969. See there].

elegantissimus Fekih, 1969, *Pyrgostylus*, p. 46, pl. 7, fig. 15. Pliocene of Tunisia. Probably a juvenile shell.

elongata Philippi, 1844, *Chemnitzia*. No data, non vidi. fide Bronn, 1848, p. 288. (*Chemnitzia* and p. 1068, *Pyrgiscus*). [Not *Turbonilla elongata* Pease, 1867, p. 293, pl. 24, fig. 22, which is *Turbonilla aulica* Dall and Bartsch, 1906, from the Pacific; nor *Turbonilla* (*Strioturbonilla*) *miocrassulata* var..., Peyrot, 1938, p. 65, no figure, for which see *miocrassulata* Sacco, 1892.

elongata Peyrot, 1938, *Turbonilla* (*Strioturbonilla*) *miocrassulata* var... p. 65, no figure. Miocene of France.

elongatissima Sangeorgi, 1926, *Turbonilla*, p. 98, pl. 7, fig. 20. Tertiary of Italy.

eritima Smith, 1890, *Turbonilla* (*Dunkeria*) p. 276, pl. 23, fig. 22. Recent, St. Helena.

euterpe Semper, 1861, *Turbonilla*, 365, no figure. Oligocene of Germany. For figure see Speyer, 1871, p. 65, pl. 11, figs. 7-11.

evoluta von Koenen, 1891, *Turbonilla*, p. 267, pl. 43, figs, 12a, b. and 13a, b. Oligocene of Lattorf, Germany. Not turbonillid but a *Syrnola*. There is a "variety" *tenuis* von Koenen, 1891, *ibid.* pl. 43, figs. 14a, b. from the same formation.

excolumnaris Sacco, 1892, *Pyrgostelis*, Vol. 12, p. 7. New name for *Pyrgostelis columnaris* Pantanelli, 1884, not of Bonelli.

exdensecostata Sacco, 1892 *Pyrgostelis rufa* var..., Vol. 12, p. 4, pl.2, fig. 118 (in Vol. 11). See *crenata* Brown, 1827.

exflorentina Sacco, 1892, *Turbonilla*, Vol. 11, p. 75. New name for *Turbonilla florentina* de Stefani, 1888, which according to Sacco is not *florentina* Costa, 1829.

exgracilis Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 90, pl. 2, fig. 99. Pliocene of the Italian Piedmont.

exigua Monterosato, 1878, *Odostomia* (*Turbonilla*) *rufa* var..., p. 34. See *crenata* Brown, Brown, 1827. [Not *Odostomia elegans* var. *exigua*, which according to Nordsieck, 1972, is *Evalea spiridioni* Nordsieck, 1972, p. 102, fig. 18, and is a new name. for *O. vitrea* Brusina, 1865, non A. Adams, 1860 (*Odostomia*), p. 416, no figure, Korea Strait at 46 fms; nor *Turbonilla exigua* Briart and Cornet, 1873, p. 17, pl. 6, figs. 9a, b. Palaeocene of Belgium. See there].

exigua Briart and Cornet, 1873, *Turbonilla*, p. 17, pl. 7, figs. 9a, b. Palaeocene (Montien) of Belgium.

exilis Seguenza, 1876, *Turbonilla*, p. 14, No. 537. Pliocene of southern Italy. [Not *Chemnitzia exilis* C. B. Adams, 1850, p. 74, no figure. Recent, Jamaica].

exjeffreysi Sacco, 1892, *Turbonilla*, p. 564, pl. 49, fig. 19. See *Turbo lacteus* Linné, 1758.

expallida Harmer, 1920, *Turbonilla*, p. 564, pl. 49, fig. 19. See *Turbo striatulus* Linné, 1766.

expansa Harmer, 1920, *Turbonilla* (*Pyrgostelis*) *varicula* var..., p. 568, pl. 49, fig. 27. See *varicula* S. V. Wood, 1848.

explicatula Sacco, 1892, *Pyrgolampros pseudoterebralis* var..., Vol.11, p. 88. See *pseudoterebralis*, Sacco, 1892.

extensa Briart and Cornet, 1873, *Turbonilla*, p. 14, pl. 6, fig. 7a, b. Palaeocene (Montien) of Belgium. Not turbonillid, but *Orinella*. See Cossmann, 1921, p. 225 and Glibert, 1973, p. 88.

exunica Sacco, 1892, *Turbonilla*, Vol. 11, p. 81. See *unica* Mont. (*Chemnitzia*), S. V. Wood, 1848, Crag Mollusca, p. 83, pl. 10, fig. 9.

facki von Koenen 1882, *Turbonilla*, p. 252, pl. 6, figs 14a, b. See *spiculum* Eichwald, 1853.

falloti Cossmann and Peyrot, 1917, *Turbonilla*, 347, Atlas (1919), pl. 8, figs. 76-78. Miocene of France. See also Cossmann, 1921, p. 279, pl. 6, figs. 53-54.

fasciata Requien, 1848, *Chemnitzia*, p. 59. See *crenata* Brown 1829. [Not *Turbonilla fasciata* Orbigny, 1846, p. 496, pl. 76, figs. 4-7. Recent, Rio de Janeiro; nor *Dunkeria fasciata* Tenison Woods, 1876, p. 14. Recent, Tasmania].

fenestrata Forbes, 1848, *Odostomia* (in) Jeffreys, 1848. Often reported as *Turbonilla* or *Chemnitzia* but is a *Tragula* which probably is pyrgulinid. Probable synonyms are *Chemnitzia rigacci* Conti, 1864, p. 30 and 50, from the Pliocene of Monte Mario, Italy and *Turbonilla weinkauffi* Dunker, 1862, pl. 13, fig. 9. Recent, off Alger, Mediterranean.

filosa S. V. Wood, 1848, *Chemnitzia*, p. 82, pl. 10, figs. 7, 7a. Pliocene of Sutton, Gr. Britain. There is a probable synonym with three varietal names: *Chemnitzia similis* S. V. Wood, 1848, p. 84, pl. 10, figs. 11 and 11a, Pliocene of Sutton, Gr. Britain; *Turbonilla* (*Pyrgiscus*) *similis* var. *ecostata* Harmer, 1920, p. 570, pl. 49, fig. 31. Pliocene of Sutton, Gr. Britain and also from the same locality: *Chemnitzia similis* var. *laevigata* S. V. Wood, 1848, figs. 11b, c; *Turbonilla* (*Pyrgostelis*) *similis typica* Harmer, 1920, p. 570, pl. 49, fig. 32 is not a "variety" but merely the "normal" form of the nominal species.

flexicostata Cossmann and Peyrot, 1917, *Turbonilla* (*Strioturbonilla*), p. 360, Atlas, 1919, p. 10, figs 74, 76. Miocene (Helvetien) of Orthez, France.

florentina Costa, 1829, *Turbonilla*, no data, non vidi. Cited by de Stefani, 1888, pl. 11, fig. 25, and Sacco, 1892, p. 75, (*Turbonilla*). Sacco gave the name *exflorentina* to the specimens of De Stefani.

formosa Jeffreys, 1848, *Odostomia*, p. 347, no figure. Recent, Oxwich Bay, near Swansea, Gr. Britain. Atlantic and Mediterranean. See also Forbes and Hanley, 1853, Vol.III, p. 248, pl. 93, fig. 5 (*Chemnitzia*) and Harmer, 1920, p. 569, pl. 49, fig. 30 [*Turbonilla* (*Pyrgostelis*)]. There is a subspecies: *Turbonilla formosa scalaroides* Nordsieck, 1972, p. 244 (*Pyrgiscus*). Recent, from Shigmona, Israel. [Not *Turbonilla formosa* Vincent and Rutot, 1879, p. 41, Tertiary of Belgium (see there); nor *Turbonilla formosa* Verrill and Smith, 1880, p. 398, no figure, which Jeffreys claims is *Odostomia magnifica* Seguenza, 1880 of the Pliocene of Italy. See *magnifica* Seguenza, 1880) which according to some was also renamed *Turbonilla bushiana* Verrill, 1882, (Recent, off New England and Maine). There also exists *Chemnitzia formosa* Klipst, 1856, no data, non vidi.

formosa Vincent and Rutot, 1879, *Turbonilla*, p. 141. "Sables de Wemmel", Belgium. Possibly described earlier.

fragilis Lamarck, 1804, *Melania*, p. 433, No. 11. Tertiary of Grignon, Basin of Paris, Orbigny, 1850, Vol. II, p. 342, cites it as a *Chemnitzia*. [Not *Turbonilla fragilis* Deshayes, 1864, Vol. 2, p.

569, Atlas, pl. 20, figs. 11, 12, (see there); nor *Turbonilla fragilis* A. Adams, 1860. Recent, Tsu-Sima, Japan, at 16 fms.; nor *Turbonilla* (*Ondina*) *fragilis* Dall, 1892, p. 253, pl. 20, fig. 5, which is not turbonillid but probably a *Brachystomia* and which was renamed *subfragilis* by Cossmann, 1921, p. 244.

fragilis Deshayes, 1864, *Turbonilla*, Vol. 2, p. 569, Atlas, pl. 20, figs. 11, 12, which is a *Belonidium*. Eocene, Paris Basin, France.

frederici Peyrot, 1938, *Turbonilla* (*Strioturbonilla*), p. 67. New name for *Turbonilla koeneni* Sacco, 1892, non *T. koeneni* Dollfus and Dautzenberg, 1882. Sacco, 1892 introduced *koeneni* as new name for *Turbonilla costellata* Grateloup as reported by von Koenen, 1882, from the Miocene of Germany.

fulgidula Jeffreys, 1884, *Odostomia*, p. 359, pl. 27, fig. 3. Recent, Atlantic Ocean (Station 13, Porcupine Expedition). This is a *Turbonilla*, see Tryon, 1886, p. 323, pl. 75, figs. 86, 87, (*Turbonilla*); Sacco, 1892, p. 96 (*Strioturbonilla*); Clessin, 1900, p. 133, pl. 17, fig. 8, (*Turbonilla*); but Kobelt, 1905, p. 125, pl. 72, fig. 7, has *Parthenina*; Nordsieck, 1972, p. 129, *Turbonilla* (*Strioturbonilla*).

fulvocincta Thompson, 1840, *Turritella*, p. 98. See *crenata* Brown, 1827.

gallica Sacco, 1892, *Turbonilla*, p. 272. See *Turbo lacteus* Linné, 1758. [Not *T. obliquata gallica* Sacco, 1892; see there].

gallica Sacco, 1892, *Turbonilla obliquata* var..., Vol. 11, p. 81. See *obliquata* Philippi, 1844.

gallicula Sacco, 1892, *Pyrogstelis rufa*, var..., Vol. 12, fig. 3. See *crenata* Brown, 1827. [Not *Strioturbonilla gallica* Sacco, See there].

gallicula Sacco, 1892, *Strioturbonilla*, Vol. 11, p. 96. New name for *Turbonilla densecostata* Philippi, 1844, as described by Bucquoy, Dautzenberg and Dollfus, 1883, Vol. I, p. 183, and Vol. 2 (1898), p. 812.

gastaldii Semper, 1861, *Turbonilla*, p. 406. See *Turbo lacteus* Linné, 1758.

gaultinus Gardner, 1876, *Pyrgiscus*, p. 112, pl. 4, figs. 8-10. Cretaceous of Great Britain. Probably not pyramidellid.

gemina Boettger, 1906, *Turbonilla* (*Pyrgolampros*), p. 129, No. 451, no figure. For figure see Zilch, 1934, p. 244, pl. 13, fig. 15. Miocene of Hungary.

gigantoastensis Sacco, 1892, *Pyrgostelis rufa* var..., Vol. 12, p. 6, pl. 2, fig. 127 (in Vol. 11). See *crenata* Brown, 1827.

girondica Benoist (in) du Boucher 1884-1885, p. 176. See *Turbonilla costellata*, Grateloup, 1827.

gitaena Dautzenberg and Fischer, 1897, *Turbonilla*, p. 42, no figure. Recent, Azores in 1846 m. By Nordsieck, 1972, p. 127, placed in *Cylindriturbonilla*.

gracilicosta Glibert, 1962, *Turbonilla* (*Mormula*), p. 22, No. 70, no figure. Anversien of The Netherlands. Originally was labelled *Scalaria* (?) *gracilicosta* Bosquet. Holotype in Inst. Roy. Sci. Naturelles, Brussels, No. 2559.

gracilior Kuster Wendenburg, 1973, *Turbonilla* (*Pyrgolampros*) *compressicosta* var..., p. 73, pl. 4, fig. 68. See *compressicosta* Sandberger, 1861.

gracilis Grateloup, 1827, *Auricula*, p. 108, No. 81, which appears to be *Chemnitzia pusilla* Philippi, 1844 (see there); Preoccupied by *gracilis* Brocchi, 1814. There are several homonyns: outside Europe: *Turbonilla gracilis* Clessin, 1900, p. 161, pl. 29, fig. 3 (very poor), described from Cuba; and *Turbonilla gracilis* De Kay, no data, non vidi, fide Simpson, 1887, p. 58. (*Turbonilla*) off New England. There are four European ones.

gracilis Brocchi, 1814, *Turbo*, p. 382, pl. 6, fig. 6. Tertiary of San Giusti, Italy, fide Rossi Ronchetti, 1955, p. 154, [*Turbonilla* (*Pyrgolampros*)]. Figures in Sacco, 1892, p. 89, pl. 2, fig. 98 (*Pyrgolampros*). A synonym is *Chemnitzia recta* Etheridge and Bell (in) A. Bell, 1898, p. 147. Pliocene of Gr. Britain. The original assignment cannot be called valid, and a later valid description was given by Harmer, 1920 (1918), but by then was precoccupied by *Turbonilla* (*Pyrgiscus*) *recta*, described by Dall and Bartsch, 1909 from Lower California.

gracilis de Koninck ,1838, *Chemnitzia*, no data, non vidi. Jeffreys, 1884, p. 359 states that this is a European fossil *Odostomia*. This genus, as used by Jeffreys, includes *Turbonilla*.

gracilis Philippi, 1844, *Chemnitzia*, Vol. II, p, 137, pl. 24, fig. 11. See *T. delicata* Monterosato, 1874.

gracilis Fekih, 1967, *Mormula*, p. 42, pl. 7, fig. 11. Pliocene of Tunisia.

gracillima Koch and Wiechmann, 1872, *Turbonilla*, p. 104. Miocene of North Germany. [Not *Turbonilla gracillima* Almera and Bofill, 1898 (see there); nor *Chemnitzia gracillima* Carpenter, 1857, p. 431. Recent Mazatlan, Mexico; nor *Chemnitzia gracillima* Gabb, 1865, p. 186, no figure. Recent, California, which was renamed *gabbiana* Cooper, 1870].

gracillima Almera and Bofill, 1898, *Turbonilla*, p. 171, pl. 5, figs. 8a, b. Pliocene of Catalonia.

gracillima Smith, 1871, *Obeliscus* (*Syrnola*), p. 734, pl. 75, fig. 17. Recent, Whydah, Dahomey. See *angasi* Clessin, 1900.

gradata Monterosato, 1878, *Odostomia* (*Turbonilla*) *elegantissima* var.. p. 94. See *Chemnitzia pusilla* Philippi, 1844.

gradatoides Sacco, 1892, *Turbonilla pusilla* var..., Vol. 1, p. 83, pl. 2, fig. 79. See *Chemnitzia pusilla* Philippi, 1844.

grateloupi Orbigny, 1852, *Chemnitzia*, Vo. 11, p. 5, no figure. New name for *Melania costellata* as identified by Grateloup, 1847, non Lamarck, 1804.

grateloupi Orbigny, 1852, *Turbonilla*, Prodrome, Vol. III, P. 35, No. 504. Miocene of southern France. New name for *Acteon spina* Grateloup, 1847, non Ferussac. See von Koenen, 1822, p. 262, pl. 6, fig. 4 (*Turbonilla*) and Cossmann and Peyrot, 1917, Vol. III, p. 308, fig. 40, who correctly placed it in *Syrnola*. Sacco, 1892, named von Koenen's material *Eulimella exgrateloupi*. Originally Orbigny spelled *gratteloupi*. but later authors emended this to *grateloupi*.

grossa Marshall, 1894, *Odostomia pusilla* var... Recent, p. 384. See *pusilla* Philippi, 1844.

gruveli Dautzenberg, 1912, *Turbonilla*, p. 61, pl. 2, figs. 36-37. Recent, Congo River Estuary. There is a "variety" *multicostata*, p. 61, pl. 2, fig. 38 from the same location.

guernei Dautzenberg, 1889, *Turbonilla*, Vol, 1, p. 60, pl. 4, figs. 6a-c. Recent, Pico, Azores in 1287 m.

gulsonae Clark, 1851, *Chemnitzia*. Recent, Exmouth, Gr. Britain. For figures see Forbes and Hanly, 1853, p. 281, pl. 132, fig. 6, and S. V. Wood, 1872, p. 62, pl. 4, fig. 26. Not pyramidellid and usually reported as *Pherusa*.

hamata Nordsieck, 1972, *Turbonilla* (*Graciliturbonilla*), p. 125, pl. 5, figs. 23-24. See *delicata* Monterosato, 1874.

hamonvillei Dautzenberg and Fischer, 1896, *Turbonilla*, p. 471, pl. 20, fig. 3. Recent, Azores, at 1300 m. See also Kobelt, 1905, p. 150, pl. 74, fig. 13, and Dautzenberg, 1927, p. 176, pl. 5, fig. 20, and Nordsieck, 1972, p. 122, pl. 5, fig. 13.

hannoni Pallary, 1912, *Turbonilla*, no data, non vidi, fide, Pallary, 1914, and Pasteur Humbert, 1962, p. 152.

harderi Grönwall, 1907, *Turbonilla*, p. 43, fl. 1, figs. 26. Palaeocene of Jutland, Denmark.

harmeri Glibert, 1958, *Turbonilla* (*Pyrgolidium*) *internodula*..., p. 20, pl. 2, fig. 14d. See *internodula* S. V. Wood, 1848.

haroldi Smith, 1890, *Turbonilla*, p. 275, pl. 23, fig. 18. Recent, St. Helena. Probably a *Dunkeria*. [Not *Turbonilla haroldi* Laws, 1937, p. 420, pl. 33, fig. 14. Off Oamaru, Recent, New Zealand in 50 fms.].

haullevillei Dautzenberg, 1912, *Turbonilla*, p. 62, pl. 2, figs. 34, 35. Recent, Congo River estuary, at 25 m.

heberti Deshayes, 1864, *Turbonilla*, p. 566, pl. 21, figs. 11-13. Oligocene of Jeures, France.

helena Semper, 1861, *Turbonilla*, p. 364, non vidi. See Koch and Wiechmann, 1872, p. 102. [Not *Turbonilla* (*Pyrgiscus*) *helena* Bartsch, 1915, p. 77, pl. 14, fig. 1. Recent, Port Alfred, South Africa; nor *Turbonilla helena* Thiele, 1925, p. 322, pl. 17, figs. 19, 19a. Recent, off Padang, Sumatra.]

hemiacirseoides Sacco, 1892, 1892, *Pyrgostylus*, Vol. 12, p. 12, pl. 2, fig. 148 (in Vol. 11). Pliocene of the Italian Piedmont. There is a "variety": *Pyrgostylus hemiacirseoides sulcatolanceae* Sacco, 1892, Vol. 12, p. 12, fig. 149, (in Vol, 11). Also, Pliocene of the Italian Piedmont.

hemisyrnola Boettger, 1906 *Turbonilla* (*Pyrgolampros*), p. 128, No. 446. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 243, pl. 12, fig. 43. [*Turbonilla* (*Pyrgolampros*)].

hibernica Leach, no data, non vidi. See *crenata*, Brown, 1827.

hoeki Dautzenberg and Fischer, 1896, *Turbonilla*, p. 490, pl. 20, fig. 1. Recent, Azores, at 2102 m. See also Kobelt, 1905, p. 149, pl. 74, fig. 15, and Nordsieck, 1972, p. 122, pl. 5, fig. 12.

hoernesi von Koenen, 1882, *Turbonilla*, p. 263, pl. 6, figs. 1a, b. Miocene of middle Europe. Not turbonillid but *Syrnola* or *Eulimella*. See Glibert, 1952, p. 58, pl. 4, fig. 8, and Anderson, 1964, p. 324, pl. 47, figs. 284a, b, (*Eulimella*).

hoernesiana Sacco, 1892, *Turbonilla pseudocostellata* var..., Vol. 11, p. 77 . See *Eulima scala* Eichwald, 1853.

hordacea Lamarck, 1804, *Melania*, Vol. 4, p. 431. Miocene of France. See also Basterot, 1825, p. 35 (*Melania*), Orbigny, 1850, Vol. II, p. 342 (*Chemnitzia*); Vincent and Rutot, 1897, p. 99 and 116, (*Chemnitzia*), Perhaps not pyramidellid.

humboldti Risso, 1826, *Turbonilla*, p. 394, fig. 63. Recent, Mediterranean. Not turbonillid. Nordsieck, 1972, p. 101, pl. 2, fig. 15 classified it as *Kleinella* (*Euparthenia*). There are countless "varieties" and other names.

hungarica Boettger, 1901, *Turbonilla*, p. 108, No. 345. Miocene of Kostej, Hungary; See also Zilch, 1934, p. 241.

ignota Harmer, 1920, *Turbonilla* (*Pyrgostelis*), p. 572, pl. 49, fig. 41. Pliocene of Gr. Britain.

imbricataria Deshayes, 1864, *Turbonilla*, p. 576, pl. 21, figs. 16, 17. Oligocene of Paris Basin. Not turbonillid, but *Syrnola*.

impressa Reuss, 1867, *Turbonilla*, p. 158, pl. 79, fig. 8. Miocene of Poland. [Not *impressa* von Koenen, 1891. See there].

impressa von Koenen, 1891, *Turbonilla*, p. 618, pl. 43, figs. 10-11, is a *Pyrgolampros* from the lower Oligocene of Germany. See also Albrecht and Valk, 1943, p. 45, pl. 9, figs. 290-293. [*Turbonilla* (*Pyrgolampros*)] and Glibert and Heinzelin, 1954, p. 360. [*Turbonilla* (*Pyrgolampros*)]. There is a "variety": *Turbonilla impressa* var. *oligocenica* Sacco, 1892, Vol. 11; p. 87. Sacco defines fig.11, given by von Koenen as this variety.

inaspecta Fuchs (date not given), *Melania*, p. 539, pl. 20, figs. 19 and 33. Miocene or Lower Pliocene of middle Europe. Often considered turbonillid but more likely eulimellid. It is the type of *Microbeliscus* Sandberger, 1874, p. 690, which thus appears to be an unjustified synonym of *Chemnitzia*. See also Dall and Bartsch, 1909, p. 33.

incerta Grateloup, 1840, *Auricula*, Vol. 1, Atlas, figs. 61-64. Classified by Orbigny, 1852, Vol. III,p. 35 as *Turbonilla*, but according to Sacco, 1892 is *Eulimella*. There is a "variety" *Auricula incerta conica* Grateloup, 1840, ibid., figs 63-64. Miocene of southern France. [Not *Odostomia* (*Turbonilla*) *dipsycha* var. *incerta* Watson, 1886. Recent, Australia].

incisa von Koenen, 1891, *Turbonilla*, p. 621, pl. 43, figs. 1a, b, and 2a, b. Lower Oligocene of Germany [Not *Turbonillia incisa* Bush, 1899, p. 156 and 174, pl. 8, fig. 12. Recent, West Florida].

incognita De Grange-Touzin, 1895, *Turbonilla*, p. 401, pl. 9, figs. 1. 1a. Miocene of southern France. See also Cossmann and Peyrot, 1917, p. 352, pl. 10, figs. 72-73.

indistinctus Montagu,1808, *Turbo*, p. 129. By many workers reported as *Turbonilla*, f. i. Weinkauff, 1868; Seguenza, 1873, p. 354, No. 305; Sars, 1878; Zuccari, 1882; Tryon, 1886, p. 326, pl. 74, figs. 73-74; Locard, 1892; Chaster and Heathcote, 1894, etc. It is not a *Turbonilla* and Aartsen 1975 and 1977 classifies it as *Chrysallida*. Reported by others under various generic designations (*Pyrgulina*, *Parthenina*, *Perparthenina*, *Odostomia*, etc.). Range, Miocene to Recent, South Scandinavia to Gibraltar.

inflexa von Koenen, 1891, *Turbonilla*, p. 622, pl. 43, figs. 7a, b. Lower Oligocene of Lattorf, Germany.

ingens Vincent, 1876, *Turbonilla*, p. 146, pl. 9 fig. 5. Eocene of Belgium. Doubtfully pyramidellid. If correctly named it should be the largest *Turbonilla* known (32 m.m.).

innexa von Koenen, 1891, *Turbonilla*, p. 623, pl. 43, figs. 8a, b, and 9a, b. Lower Oligocene of Lattorf, Germany.

innovata Monterosato, 1884, *Turbonilla*, p. 92. See *Chemnitzia* pusilla Philippi, 1844.

ino Semper, 1861, *Turbonilla*, p. 360,, For figure see Speyer, 1871, p. 58, pl. 10, figs. 15, 16a, b. Oligocene-Miocene of Germany. Probably not turbonillid, but Koch and Wiechmann, 1872, believe it to be a form of *T. subulata* Merian.

intermedia Grateloup, 1827, *Auricula*, Vol. 2, p. 107, No. 80. Miocene of Southern France. See also Orbigny, 1853, Vol. III, p. 5, (*Turbonilla*), and Cossmann and Peyrot, 1917, p. 373, fig. 48 (in text), *Pyrgostylus*. [Not *Dunkeria intermedia* Carpenter, 1857, p. 435, no figure. Recent, Mazatlan, Mexico].

internodula S. V. Wood, 1848, *Chemnitzia*, Vol. 1, p. 81, pl. 10, figs.6, 6a. Pliocene of Gr. Britain, Netherlands, France, Italy, and Tunisia. See also Altena, Bloklander and Pouderoyen, 1964, p. 5, pl. 21, No. 201, *Turbonilla* (*Pyrgolidium*), and Fekih, 1969, p. 34, pl. 6, figs. 2a-c, *Turbonilla* (*Pyrgolidium*). There are several "varieties": *Turbonilla* (*Pyrgolidium*) *internodula acuminata* Harmer, 1925, Vol. 72, p. 574, pl. 49, fig. 36. Pliocene of Gr. Britain; *Turbonilla* (*Pyrgolidium*) *internodula* var. *conica* Harmer, 1920, p. 574, pl. 49, figs. 37, 38. Pliocene of Great Britain; *Turbonilla* (*Pyrgolidium*) *astensipupoidea* Sacco, 1892, part. 11, p. 84, pl. 2, fig. 84 bis. Astiano of Italy; *Turbonilla* (*Pyrgolidium*) *internodula* var. *conicoidea* Sacco, 1892, Vol. 11, p. 84, no figure. New name for *P. interrnodula* as reported by Nyst, 1878, pl. 6, fig. 3. Pliocene of Belgium; *Turbonilla* (*Pyrgolidium*) *internodula* var. *harmeri* Glibert, 1958, p. 20 (1), fig. 14d. Scaldisien of Belgium; *Chemnitzia internodula ligata* S. V. Wood, 1879, p. 24, pl. 2, fig. 11. Pliocene of Gr. Britain. See also Harmer, 1920, p. 573, pl. 49, fig. 35; *Turbonilla* (*Pyrgolidium*) *internodula miocenica* Sacco, 1892, Vol. 11, p. 84, pl. 2, fig. 82. Often misspelled *miocaenica*. See also Glibert, 1949,p. 190, pl. 12, fig. 7. Loire Basin, France and Monte Gibbio,Italy;*Turbonilla* (*Pyrgolidium*) *internodula* var. *subanodulina* Sacco, 1892, Vol. 11, p. 84, pl. 2, fig. 84. Pliocene of Italy; *Turbonilla* (*Pyrgolidium*) *internodula* var. *turrituloides* Sacco,1892, Vol. 11, p. 84, pl. 2, fig. 3. Italian Tertiary.

interpositus Cerulli-Irelli, 1914, *Turbonilla* (*Pyrgostylus*), p. 273, pl. 23, figs. 54, 55. Pliocene of Monte Mario, Italy. See also Fekih,1969, p. 47, pl. 9, fig. 7. Pliocene of Tunisia.

intumescens van Koenen, 1891, *Turbonilla*, p. 624, pl. 43, fig. 18. Lower Oligocene of Germany. Not turbonillid, but is *Syrnola*. See also Janssen, 1963, p. 36, pl. 4, fig. 4. (*Syrnola* c. f.) and Spaink, 1963, p. 47 [*Syrnola* (*Syrnola*)].

intuspersulcata Sacco, 1892, *Turbonilla lactea* var... See *Turbo lacteus*, Linné, 1758.

irregularis "Sismonda m.s." Sacco, 1892. No further data. See *lanceae* Libassi, 1859.

jeffreysi Koch and Wiechmann, 1872, *Turbonilla*, p. 113, pl. 3, figs. 9a, b. [Not *Pyrgostelis rufa* var..., Sacco, 1892, Vol. 12, p. 3. See there; nor *jeffreysi* Forbes and Hanley, 1853,Vol. 3, p. 251. See there and *Melania scalaris* Philippi, 1826.]

jeffreysi Sacco, 1892, *Pyrgostelis rufa* var..., Vol. 12, p. 3. See *crenata* Brown, 1827.

jeffreysi Forbes and Hanley, 1853, *Chemnitzia*, Vol. III, p. 251, pl. 94, fig. 5. See also Winckworth, 1932, p. 227, (*Pyrgisculus*), and Fretter and Graham, 1949, p. 503, 509 and 522-23, (*Turbonilla*).

joubini Dautzenberg, 1912,*Turbonilla*, p. 65, pl. 2, figs. 43-44. Recent, Congo River estuary, Africa.

kendalli Harmer, 1920, *Turbonilla*, p. 561, pl. 49, fig, 12. Pliocene of St. Erth, Gt. Britain.

kobelti Dautzenberg, 1912, *Turbonilla*, p. 64, pl. 3, figs. 11-12. Recent, off Cotonou, West Africa in 20-25 m.

kochi Müller, 1847, *Chemnitzia*, p. 9, p. 4, figs. 7a, b. Cretaceous (Greensand of Vaalsbrug), Netherlands. Of doubtful affinity. [Not *Pyrgiscus kochi* Philippi, 1844. See there].

kochi Philippi, 1844, *Pyrgiscus*, 1844, p. 53, pl. 3, fig.7. Tertiaries of Germany. See also Koch and Wiechmann, 1872, p. 105, (*Turbonilla*).

koeneni Dollfus and Dautzenberg, 1886, *Turbonilla*, p. 141, No. 192, no figure. Miocene of France. [Not *koeneni* Sacco, 1892. See there].

koeneni Sacco, 1892, *Turbonilla*, p. 78. Renamed *Turbonilla frederici* by Peyrot, 1938, see there.

koeneniana Sacco, 1892, *Turbonilla pseudocostellata* var..., Vol. 11, p. 77, no figure. See *scala* Eichwald, 1853.

korytnicensis Friedberg, 1938, *Turbonilla*, p. 64, fig. 14 (in text). See *spiculoides* Cossmann and Peyrot, 1917, p. 353, Atlas, 1919, pl. 9, figs. 89-90.

kostejana Boettger, 1906, *Turbonilla* (*Pyrgolampros*), p. 129, No. 450. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 243, pl. 13, fig. 44.

kostejensis "Boettger" Cossmann, 1921, *Pyrgolampros*, p. 288. *Lapsus calami* for *kostejana*.

lactea Lamarck, 1806, *Melania*, Vol. 4, p.430, pl. 12, fig. 5. Fossil from Paris Basin. See also Grateloup, 1840, (*Melaniens*, figs. 10-13); Orbigny, 1850, Vol. 12, p. 310, and 413 (*Chemnitzia*) and Bronn, 1853-1856, p. 473. (*Chemnitzia*). A species of uncertain affinity and probably not pyramidellid. [Not *Turbo lacteus* Linné, 1758 (see there), nor *Chemnitzia lactea*, Krauss, 1848, p. 15, fig. 23, which probably is the same as *Chemnitzia candida*, A. Adams, 1855. Recent, Indo-Pacific.

lacteus Linné, 1758 *Turbo*, p. 765, no figure. Recent, Norway to Canary Islands and Mediterranean. Also Pliocene of Italy, and Gr. Britain. There are many synonyms and "varieties". *Turbo acutus* Donovan, 1804, p. 179, fig. 1. Recent, Guernsey; *Voluta alba* Pennant, 1818, p. 296. Recent, Dublin Bay; *Turbonilla lactea basidepressa* Cerulli-Irelli, 1914, pl. 23, figs. 26-28, no text, figures only; *Melania brocchi* Bronn, 1831, p. 76, fossil from Italy and Vienna Basin; *Melania campanellae* Philippi, 1836, p. 156, pl. 9, fig. 5. Recent, Sicily. See also Kobelt, 1905, p. 141; pl. 72, figs. 8, 9, and Fekih, 1969, p. 30, pl. 5, fig. 6 and Nordsieck, 1972, p. 123 , pl. 5, fig. 16, *Turbonilla* (*Chemnitzia*); *Turbonilla lactea* var. *brevicostulata* Sacco, 1892, Vol. 11, pl. 2, fig. 54. Italian Tertiary; *Turbonilla lactea* var. *conicoparvula* Sacco, 1892, Vol. 11, p. 75, pl. 2, fig. 7. Pliocene of the Piedmont, Italy; *Turbonilla campanellae* var. *convexa* Fekih, 1969, p. 31, pl. 5, pl. 9. Pliocene of Tunisia; *Turbonilla lactea* var. *convexulosulcata* Sacco, 1892, part 11, p. 74, pl. 2, fig. 50. Pliocene (Astien) of the Italian Piedmont; *costulata* Risso 1826, *Turbonilla*, Vol. IV, p. 224, fig. 72. See also Bartsch, 1909, and Winckworth, 1932, p. 227. It is not generally accepted that this is the same as *Turbo lacteus* Linné, 1758; costulata was selected by Hermannsen, 1852, as type of *Turbonilla*; (See *costulata* Risso, 1826); *Turbonilla elegans* Seguenza, 1876, Vol. 7, p. 14, no figure. Pliocene of south Italy. See also Sacco, 1892, p. 74, pl. 2, fig. 52 (*Turbonilla lactea* var...); *Turbonilla elegantissima* var. *crassecostata* Doderlein, 1862. Miocene of central Italy. See also Sacco, 1892, p. 78. Possibly identical with *Turbonilla costellatoides*

var. *dertocolligens* Sacco, 1892; *Chemnitzia elegantior* S. V. Wood, 1872, p. 60, figure in Vol. 1, p. 81, pl. 10, fig. 5 as *Chemnitzia elegantissima*. Pliocene of Gr. Britain; *Turbo elegantissima* Montagu, 1803, p. 298, pl. 10, fig. 2, also in Supplement, 1808, p. 124. See also Babio and Theriot, 1975, p. 87, pl. 2, figs. D, E, and F, (*Turbonilla*);*Turbonilla exjeffreysi* Sacco, 1892, Vol. 11, p. 72, new name for *Chemnitzia jefreysi* Koch and Wiechmann as identified by S. V. Wood from the English Pliocene; *Turbonilla gallica* Sacco, 1892, Vol. 11, p. 72. New name for *T. lactea* Linné as figured by Bucquoy, Dautzenberg and Dollfus, 1883, pl. 21, fig. 7. Recent, from southern France; *Turbonilla gastaldii* Semper, 1861, p. 406, no figure. Pliocene of Asti and Siena, Italy; *Turritella gracilis* Deshayes, 1832, p. 147, non vidi. See Tryon, 1886, p. 322 (*Turbonilla*); *Turbonilla lactea* var. *intuspersulcata* Sacco, 1892, Vol. 11, p. 73, pl. 2, fig. 47. Pliocene of the Italian Piedmont. Considered a full species by Fekih, 1969, pl. 5, fig. 47; *Turbonilla jeffreysi* Koch and Wiechmann, 1872, p. 103, figs. 9a, b. Miocene of northern Germany; *Turbonilla millasensis* Fontannes, 1881, p. 133, pl. 8, fig. 3. Pliocene of southern France; *Turbonilla parvogallica* Sacco, 1892, Vol. 11, p. 72, new name for *Turbonilla lactea* as figured by Bucquoy, Dautzenberg and Dollfus, 1883, pl. 21, fig. 6. Recent, southern France; *Turbonilla* paucicostata Seguenza, 1876, p. 92, no figure. Pliocene of South Italy. See also Sacco, 1892, p. 75, pl. 2, fig. 53, (*T. lactea* var..); *Turbonilla lactea* var. *paucicostatabrunnea* Sacco, 1892, p. 75, no figure. Pliocene of the Italian Piedmont; *Turbonilla lactea* var. *pliogigantea* Sacco, 1892, p. 74, pl. 2, fig. 54. Pliocene of the Italian Piedmont; *Turbonilla lactea* var. *pliosigmoidea* Sacco, 1892, p. 73, pl. 2 fig. 46. Pliocene of the Italian Piedmont; *Turbonilla lactea* var. *pliosimilis* Sacco, 1892, p. 74, pl 2, fig. 48. Pliocene of the Italian Piedmont; *Turbonilla lactea* var. *pseudoflorentina* Sacco, 1892, p. 75, pl. 2, fig. 55. Pliocene of the Italian Piedmont; *Odostomia lactea* var. *paullula* Jeffreys, 1867, Vol. IV, p. 165, no figure. Recent, Great Britain. Marshall, 1900, p. 333, denies the existence fo this "variety"; *Turbonilla elegantissima* var. *similis* Monterosato, 1878, p. 33. Recent, Mediterranean; *spencerianum* Leach, no data (given genus not known to me), non vidi; *Turbonilla lactea* var. *turritolonga* Sacco, 1892, p. 73, pl. 2, fig. 45. Pliocene of the Italian Piedmont; *Turbonilla lactea* var. *turritoparva* Sacco, 1892, p, 75, pl. 2, fig. 56,

Pliocene of the Italian Piedmont; Turbonilla *lactea* var *senensigastaldii* Sacco, 1892, Vol. 11, p. 73, no figure. New name for *T. lactea* var. *gastaldii* as identified by de Stefani and Pantanelli, 1880, and figured by de Stefani, 1888, pl. 11, fig. 23.

lacteoides Sacco, 1892, *Pyrgolampros* ? p. 91, pl. 2, fig. 102. Miocene (Tortonien) of Monte Gibbio, Italy.

lacteopusilla Sacco, 1892, *Turbonilla*, p. 81, pl. 2, fig. 77. Pliocene of the Italian Piedmont. See also Strausz, 1954, p. 100, pl. 1, fig. 7, who classifies it as *Chrysallida* (*Pyrgulina*).

lactoides "Monterosato" Marshalll, 1897, *Odostomia*, p. 433. See *magnifica* Seguenza, 1880.

laevigata Deshayes, 1824, *Melania*, Vol. 2, p. 110. Of unknown affinity, but classified by Orbigny, 1850, Vol. 2, p. 342, as *Chemnitzia*. [Not *Chemnitzia laevigata* Orbigny, 1842, Vol. I, p. 227, pl. 17, figs. 7-9. Recent, Cuba and the entire Caribbean; has many synonyms, mostly by Bartsch.].

laevissima Bosquet, 1859, *Turbonilla*, p. 18, pl. 2, fig. 5. Tertiary of South Limburg, the Netherlands and western Europe. Not turbonillid but *Pupasyrnola*.

lanceae Libassi, 1859, non vidi, p. 21, fig. 6. Fossil at Altavilla, Sicily. See also Sacco, 1904, XXX, p. 24, fig. 18, (*Pyrgostylus*) and Cerulli-Irelli, 1914, p. 275, pl. 23, fig. 61. (*Turbonilla pallida* var. *lancaea*) and Fekih, 1969, p. 43, pl. 8, fig. 1. Pliocene of the Mediterranean. There are some "varieties": *Pyrgostylus lanceae* var. *communis* Sacco, 1892, Vol. 12, p. 9, pl. 2, fig. 139. Miocene-Pliocene of Italy; *Pyrgostylus lanceae* var. *convexa* Sacco, 1892, Vol. 12, p. 9,pl. 2 fig. 140, (in Vol. 11). Pliocene of the Italian Piedmont; *Turbonilla irregularis* "Sismonda ms" Sacco, 1892, Vol, 12, p. 8. No source given by Sacco; *Pyrgostylus* var. *placentina* Sacco, 1892, Vol. 12, p. 10, no figure. Pliocene (Astien) of the Italian Piedmont; *Pyrgostylus sallomacensis* Cossmann and Peyrot, 1917, p. 375, Atlas, 1919, pl. 10, figs. 12-13, fig. 64. Miocene of France. See also Peyrot, 1938, p. 70; *Chemnitzia scarabelliana* Cocconi, 1873, p. 137. Pliocene of Italy. See also Sacco, 1892, Vol. 12, p. 9, (*Pyrgostylus lanceae* var. *scarabelliana*) and Cossman, 1921, p. 294 (*Pyrgostylus*).

lanceaeoides Sacco, 1892, *Pyrgostylus prostriatulolanceae* var... Vol. 12, p. 11, pl. 2, fig. 145 (in Vol. 11). Miocene (Tortonian) of Monte Gibbio, Italy.

lanceiformis Boettger, 1901, *Turbonilla* (*Pyrgostylus*), p. 112, No. 357.

Miocene of Kostej, Hungary. See also Zilch, 1934, p. 244, pl. 13, fig. 49, [*Turbonilla* (*Mormula*)].

lanceolata Clessin, 1902, *Turbonilla*, p. 258, pl. 41, fig. 4. Recent, West Africa.

lata Seguenza, 1876, *Turbonilla*, p. 92, no figure. Pliocene of southern Italy.

laticosta von Koenen, 1891, Turbonilla, p. 629, pl. 43, figs. 15a, b, l6a,b and 17a, b. See *dentata* Speyer, 1871. [Not *latacosta* Laseron, 1959, *Exesilla*. Recent, Palm Islands, Australia.].

lecointrei Peyrot, 1938, *Pyrgostylus*, p. 71, no figure. Miocene of France.

leunisi Philippi, 1844, *Eulimella*, p. 53, pl. 3, fig. 8; Orbigny, 1853, Vol. III, p. 33 classifies it as *Chemnitzia*.

ligata Reeve, 1878, *Chemnitzia*, p. 70, no figure.. See *internodula* S. V. Wood, 1848.

ligustica Sacco, 1892, *Pyrgostelis rufa* var..., Vol. 12, p. 6, pl. 12, fig. 128. See *crenata* Brown, 1827. [Not *Turbonilla postacuticostata* var. *liguistica*, Vol. 11, p. 76, pl. 2, fig. 59, for which see *postacuticostata* Sacco, 1892].

ligustica Sacco, 1892, *Turbonilla postacuticostata* var..., Vol. 11, p. 76, pl. 2, fig. 59. See *postacuticostata* Sacco, 1892.

ligusticoterebralis Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 89, pl. 2 fig. 96. From the Piacenziano of the Italian Piedmont.

lineata G. von Martens, 1824, *Turbonilla*, p. 451, pl. 3, fig. 7. See also Clessin, 1902, p. 259, pl. 41, fig. 2, (*Turbonilla*), who mentions as synonym: *T. striata* Menke. I have not found that species. [Not *T. lineata* Holmes, 1860, p. 85, pl. 13, figs. 7A, B, from the Atlantic Coast of North America].

longiuscula Cerulli-Irelli, *Turbonilla* (*Pyrgisculus*) *scalaris* var.... See *scalaris* Philippi, 1836.

longula Boettger, 1901, *Parthenia* (*Pyrgisculus*), p. 106, No. 336. Miocene of Kostej, Hungary. Cossmann, 1921, p. 258, pl. 6, fig. 48, cites this as *Pyrgulina* (*Parthenina*), hence it probably is not turbonillid.

macandreae H. Adams, 1870, *Turbonilla*, p. 793, no figure. New name for *Turbonilla speciosa* H. Adams, 1869, p. 274, pl. 19, fig. 11, non A. Adams, 1860. See also Kobelt, 1905, p. 155, and Tryon, 1866, p. 324, pl. 74, fig. 59. Recent, Vigo, Atlantic Coast of Spain. Made by Nordsieck, 1972, p. 128, pl. 6, fig. 3, the type of *Magniturbonilla*. [Not *Turbonilla speciosa* A. Adams, 1860, p. 420, no figure. Recent, Mino-Sima, Japan, at 63 fms.]. Also not a synonym is *Mormula macandreae*

A. Adams, 1870, p. 127. Recent, Gulf of Suez, Red Sea, Persian Gulf and South Africa, which is also spelled *macandrewi* (Melvill and Standen, 1901, p. 391.].

magnifica Seguenza, 1880, *Turbonilla*, p. 264, pl. 16, fig. 25. Pliocene southern Italy. See also Nordsieck, 1972, p. 128, pl. 6, fig. 2, who made it a *Magniturbonilla*. There are several synonyms: *Turbonilla bushiana* Verrill, 1882, p. 537, pl. 58, fig. 16. Recent, N.E. United States in deep water (365-1525 fms,), fide Jeffreys, 1884, p. 357 and Jeffreys, 1884, p. 554. This is a new name for *Turbonilla formosa* Verril and Smith, 1880, p. 398, no figure, (non Klipst, 1856, nec Jeffreys, 1848). Recent, off New England, in deep water. Also exist: *Turbonilla* (*Strioturbonilla*) *bushiana abyssicola* Bartsch, 1909, p. 80, pl. 11, fig. 14, and *Turbonilla bushiana inornata* Bush, 1909, p. 479, no figure. All in deep water off New England. Furthermore: *Turbonilla magnifica* var. *simplex* Seguenza, 1880, p. 264, pl. 16, fig. 25. Pliocene of South Italy and fide Marshall, 1897: *Odostomia lactoides* "Monterosato" Marshall, 1897, p. 433.

major Kuster-Wendenburg, 1973, *Turbonilla compressicosta* var..., p. 73, pl. 4, fig. 67. See *compressicosta* Sandberger, 1861. [Not *Turbonilla* (*Chemnitzia*) *mirifica* var. *major* Nordsieck, 1972, for which see *postacuticostata* Sacco, 1892, nor *Chemnitzia major* C. B. Adams, 1852, p. 391, no figure. Recent, Panama, (Pacific), nor *Turbonilla major* Meyer, 1887, p, 51, pl. 3, fig. 3. Upper Eocene of Mississippi, U.S.A.].

major Nordsieck, 1972, *Turbonilla* (*Chemnitzia*) *mirifica* var..., See *postacuticostata* Sacco, 1892.

maltzani Clessin, 1900, *Turbonilla*, p. 160, pl. 27, fig. 6. Recent, Gorée, West Africa.

marioni de Folin, 1877, *Dunkeria*, Fonds de la Mer, Vol. 3, p. 227, pl. 1, fig. 7. Recent, Mediterranean, off France. There exists a form *Dunkeria marioni* forma *minuscula* de Folin, *ibid.* See also Nordsieck 1972, p. 131, pl. 6, fig. 14, [*Turbonilla* (*Dunkeria*)].

marteli Dautzenberg, 1912, *Turbonilla*, p. 62, pl. 3. figs 1, 2. Recent, Cotonou, West Africa, at 20-25 m.

mediocingulatus Fekih, 1969, *Pyrgostylus* (*Pyrgisculus*), p. 48, pl. 9, fig. 5. Pliocene of Tunisia.

melvilli Dautzenberg, 1912, *Turbonilla*, p. 65, pl. 3, figs. 2, 4. Recent, dredged in the Bay of Libraville, West Africa. [Not *Turbonilla* (*Nisiturris*) *materna* var. *melvilli* Ray, 1968. Recent, off Puri, India.]

meneghinii Libassi, 1859, *Turbonilla*, p. 20, fig. 10, from the Italian Tertiary near Palermo. Cossmann, 1921 classifies it as *Pyrgolidium*. There is a "variety", *Turbonilla meneghini* var. *astensiconvexa* Sacco, 1892, p. 76, pl. 2, fig. 15. Pliocene of the Italian Piedmont.

mercati de Stefani and Pantanelli, 1880, no data, non vidi. Apparently a nomen nudum in de Stefani, 1877, p. 168. See Sacco, 1892, p. 8 (*Pyrgostelis*).

micans Monterosato, 1875, *Odostomia* (*Turbonilla*), p. 33, no figure. Recent, Palermo at 210 m. See also Tryon, 1886, p. 323, p. 75, fig. 83, and Nordsieck 1972, p. 127. pl. 5, fig. 30, who lists it as *Cylindroturbonilla* for the Mediterranean and eastern Atlantic in deep water. A later name is *Odostomia attenuata* Jeffreys, 1884, p. 360, pl. 27, fig. 4. See Kobelt, 1905, p. 145, pl. 72, figs. 13, 14, (*Turbonilla*).

microscalaria Seguenza, 1876, *Turbonilla* (*Pyrgulina*), p. 92, No. 556. Not turbonillid but *Pyrgulina*. Pliocene of south Italy.

microstoma Deshayes, 1864, *Turbonilla*, Vol. 2, p. 577, pl. 27, figs. 5,6. Eocene ("Sables inferieurs") Basin of Paris. Not turbonillid, but probably a *Syrnola*.

millasensis Fontannes, 1881, *Turbonilla*, p. 133, pl. 8, fig. 3. See *Turbo lacteus*, Linné, 1758.

minima Hoernes, 1856, *Chemnitzia*, p. 542, pl. 43, figs. 22a, b. Miocene of Baden in Vienna Basins. Probably not turbonillid but pyrgulinid. See also von Koenen, 1882, p. 261, pl. 6, figs. 7a, b, (*Turbonilla*) and Boettger, 1906, p. 123, No. 429; Zilch, 1934, p. 235 (*Chrysallida* (*Pyrgulina*); Friedberg, 1954, p. 458, pl. 28, figs. 3, 4 (*Turbonilla*). A probable synonym is *Pyrgulina unica* Boettger, 1901, p. 106, No. 335. Miocene of Kostej, Hungary. [Not *Turbonilla minima* Seguenza, 1880. Miocene of Italy (see there), nor *Turbonilla corpulens* var. *minima* Kisch, 1959, p. 94, one figure. Recent, Mauritius].

minima Seguenza, 1880, *Turbonilla*, p. 112, pl. 11, figs 33, 33a. Miocene (Tortonian) of South Italy.

minor Seguenza, 1876, *Turbonilla*, p. 14. Pliocene of south Italy. [Not *Turbonilla minor* Bush, 1899, introduced as replacement name for *Chemnitzia pusilla* C. B. Adams, 1850. Recent, Jamaica which is precocupied by *Chemnitzia pusilla* Philippi, 1844, Vol. II, p. 224, pl. 28, fig. 21].

minuscula de Folin, 1877, *Dunkeria marioni* forma... See *Dunkeria marioni* de Folin, 1877. [Not *minuscula* Marshall, 1891, see there.

minuscula Marshall, 1891, *Odostomia pusilla* var..., no figure. See *Chemnitzia pusilla* Philippi, 1844.

minuta Melleville, 1843, *Terebra*, Vol. III, p. 73, pl. 4, figs. 29-32. Tertiary, Laon, France. Orbigny, 1850, Vol. 11, p. 311, classifies it as *Turbonilla*.

minutissima Szöts, 1953, *Turbonilla* (*Turbonilla*), p. 174, pl. 4, fig. 40. Eocene of Hungary.

mioapenninica Sacco, 1892, *Strioturbonilla alpina* var..., Vol. 11, p. 94, pl. 2, fig. 109. See *alpina* Sacco, 1892.

miocenica Sismonda, ?, *Chemnitzia*, non vidi. Monterosato, 1875, p. 30, gives a synonymy and states that is it *Scalaria subdecussata* Cantraine.

miocenica Sacco, 1892, *Turbonilla* (*Pyrgolidium*) internodula var..., Vol. 11, p. 84, pl. 2, fig. 82. Tortonian of Monte Gibbio, Italy. See *internodula* S. V. Wood, 1848; *miocaenica* (Glibert, 1949, p. 190, pl. 12, fig. 7 and Glibert, 1962, p. 19), is a misspelling.

mioconvexulus Sacco, 1892, *Pyrgostylus*, Vol. 12, p. 12, pl. 2, fig. 151, (in Vol. 11). Miocene (Tortonian) of Monte Gibbio Italy. See also Fekih, 1969, p. 46, pl. 8, fig. 8 and pl. 9, fig. 9.

microcrassulata Sacco, 1892, *Turbonilla* (*Strioturbonilla*), Vol. 11, p. 95, pl. 2, fig. 113. Miocene (Tortonian) of Monte Gibbio, Italy. See also Peyrot, 1938, pl. 5, fig. 3, figs. 31-32 and Glibert, 1949, p. 191, pl. 11, fig. 17. There is a "variety": *Turbonilla* (*Strioturbonilla*) *miocrassulata* var. *elongata* Peyrot, 1938, p. 65, Miocene of France (Ferrière-Arçon).

mioexreticulata Sacco, 1892, *Pyrgostelis*, Vol. 12. p. 7, pl. 12, fig. 132 (in Vol. 11). Miocene of Monte Gibbio, Italy.

miogracilis Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 86, pl. 2, fig. 88. Miocene (Elveziano) of the Piedmont, Italy.

miomutinensis Sacco, 1892, *Turbonilla* (*Pyrgostylus*), Vol. 12, p. 11, pl. 2, fig. 150, (in Vol. 11). Miocene (Tortonien) of the Italian Piedmont. See also Anderson, 1964, p. 328, pl. 49, figs. 292a, b, *Turbonilla* (*Mormula*) and Jansen, 1972, p. 60.

mioperplicatulus Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 87, pl. 2, fig. 91. Miocene (Tortonian) of Monte Gibbio, Italy. Made the type of *Pyrgolampros* Sacco, 1892.

miopersulcata Sacco, 1892, *Pyrgostelis rufa* var... Vol. 12, p. 4, pl. 2, fig. 120, (in Vol. 11). See *crenata* Brown, 1827.

miopupoides Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 91, pl. 2, fig. 105. (Tortonian) of Monte Gibbio, Italy.

mioscalarata Sacco, 1892, *Strioturbonilla alpina*, var..., Vol. 11, p. 94, pl. 2, fig. 110. See *alpina* Sacco, 1892.

miostriatula Sacco, 1892, *Turbonilla* (*Pyrgostylus*), Vol. 12, p. 11, no figure. New name for *Turbonilla striatula* von Koenen, 1882, (non Linné), pl. 6, fig. 12. There is a form: *Turbonilla miostriatula* forma *edegemensis* Glibert, 1952, p. 58, pl. 4, fig. 13. Miocene of Belgium. Another "variety" is *Pyrgostylus miostriatulus* var. *striatellina* Sacco, 1892, Vol. 12, p. 11, no figure, which is the new name for *Turbonilla striatula* von Koenen, 1882 (non Linné), pl. 6, figs. 13a, b. A synonym is *Turbonilla striatula* von Koenen, 1882, (non Linné), p. 255, pl. 6, figs. 12a, b and 13a, b, from the Miocene of Stolpe, Germany. See also Gripp, 1914, p. 13 and 37, and Gripp, 1917, p. 22.

miostriatuloides Sacco, 1892, *Pyrgostylus*, Vol. 12, pl. 2, fig. 147, (in Vol. 11). Miocene (Elveziano) of the Italian Piedmont. See also Cossmann, 1921, p. 294, (*Pyrgostylus*).

miosulcatulus Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 86, pl. 2, fig, 87. See *taurinensis* Sacco, 1892.

miovatus Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 91, pl. 2, fig. 104. Miocene (Tortonian) of the Italian Piedmont.

mirifica Pallary, 1904, *Turbonilla*, p. 237. See *postacuticostata* Sacco, 1892.

modesta de Folin, 1871, *Dunkeria*, Fonds de la Mer, Vol. 1, p. 231, no figure. Recent, Sardinia, fide Kisch, 1959, p. 112; Nordsieck, 1972, p. 105 has it as *Menestho*. [Not *Truncatella modesta* C. B. Adams, 1851, p. 132, no figure, for which see Clench and Turner, 1950, p. 310, pl. 40, fig. 17, which is a *Turbonilla*. Also see Coomans, 1963, p. 158; nor *Chemnitzia modesta* Orbigny, 1853, p.222, Atlas, pl. 16, figs. 22-24, Recent, Cuba; nor *Chemnitzia modesta* Stimpson, 1851, p. 16, no figure, Recent, St. Georges Bank, north Atlantic, which is an *Odostomia*].

morleti Cossmann, 1888, *Turbonilla*, p. 110, pl. 4, figs. 20-21. Eocene of France. See also Cossmann and Pissarro, 1910-13, pl. 7, figs. 45 bis and Gougerot, 1967, p. 100, fig. 12. Not turbonillid but is a *Belonidium*.

moulinsi, no data, non vidi, cited by Cossmann, 1921, p. 283, pl. 6, figs. 51-52. Miocene of France.

mülleri von Maltzan, 1885, *Turbonilla*, p. 27. Recent, Senegal, West Africa, at 20 m. See also Clessin, 1900, p. 157, pl. 26, fig. 8, and Marche-Marchad, 1958, p. 40 (*Turbonilla*).

multicostata Dautzenberg, 1912, *Turbonilla gruveli*..., p. 61, fig. 38. See *gruveli* Dautzenberg, 1912 [Not *Turbonilla multicostata* Speyer, 1871, pl. 11, figs. 2, 2a. See there; nor *Turbonilla*

multicostata deGrange-Touzin, 1895, p. 402, pl. 9, figs. 2, 2a. See there; nor *Chemnitzia multicostata* C. B. Adams, 1850, p. 74, no figure. Recent, Jamaica, for which see also Clench and Turner,1950, p. 311, pl. 49, fig. 7].

multicostata Speyer, 1871, *Turbonilla*, pl. 11, figs. 2, 2a. Upper Oligocene of Niederkaufingen, Germany. See also Görges, 1952, p. 78.

multicostata Degrange-Touzin, 1895, *Turbonilla*, p. 402, pl. 9, figs. 2, 2a. Miocene of southern France. See also Cossmann and Peyrot, 1917, p. 355, pl. 10, figs. 33-34 and Hagn and Hölze, 1952, p. 196.

multicostula Sacco, 1892. *Turbonilla laticosta* var..., Vol. 11, p. 79, no figure. See dentata Speyer, 1871.

multidecussata Sacco, 1892, *Pyrgostelis rufa* var..., Vol. 12, p. 5, pl. 2, fig. 124 (in Vol. 11). See *crenata* Brown, 1827.

multilirata Monterosato, 1875, *Odostomia* (*Turbonilla*), p. 33, no figure. Recent, Palermo, at 60-90 m. See also Marshall, 1912, pl. 5, fig. 7 and Nordsieck, 1972, p. 132, (*Turbonilla* (*Striarcana*)).

nansoutii de Folin, 18.., *Turbonilla*, Fonds de la Mer, Vol. 2, pl. 7, fig. 4. Recent, from "North Watcher" fide Kisch, 1959, p. 103. Holotype in Paris Museum.

neumayri von Koenen, 1882, *Turbonilla*, p. 265, pl. 6, fig. 2. Miocene of North Germany. Often also spelled *neumayeri* (Sacco, 1892, p. 55; Ravn, 1907, p. 299). Is a *Syrnola* (see Janssen, 1972, p. 56, text figures 24-26 and Nordsieck 1972, p. 128 and 230, pl. 32). There is a probable synonym: *Eulimella concinna* Sorgenfrei, 1958, p. 321, pl. 69, figs. 238 a, b; pl 70, fig. 238 from the Miocene at Toftlund, Denmark. There is a "variety": *Eulimella neumayeri* var. *tauroacicula* Sacco, 1892, Vol. 11, p. 55, pl. 2, fig. 18. Miocene (Elveziano) of the Italian Piedmont. Fekih, 1969 lists it as a full species.

newtoni Cossmann, 1899, *Turbonilla*, p. 138. See *subterranea* Wrigley, 1940.

nitidula Grateloup, 1827, *Auricula*, p. 106, No. 76. Miocene of St. Paul, southern France. Classified by Orbigny as *Turbonilla*, 1852, Vol. III, p. 5. Probably not turbonillid.

nodulifera Dunker, 18.., *Turbonilla*, Vol. I, 306, pl. 35, fig. 22. Fossil. Possibly not pyramidellid. See also Seebach, 1861, p. 645.

notata Deshayes, 1861, *Turbonilla*, p. 568, Atlas, pl. 27, figs. 7-8; Eocene of Mouchy, Basin of Paris, France. Is a *Pyrgolampros*. See also Cossmann and Pissarro, 1910-13, fig. 48-4 and

Wrigley, 1934, p. 10, pl. 1 fig. 3, and Gougerot, 1967, p. 101, fig. 16.

nucleata Seguenza, 1880, *Turbonilla*, p. 112, pl. 11, figs, 35, 35a. Miocene (Tortonian) of southern Italy.

nysti Orbigny, 1852, *Turbonilla*, p. 5, No. 70. See *subcylindrica* Philippi, 1844.

obesula Deshayes, 1864, *Turbonilla*, p. 572, Atlas, pl. 27, figs. 9-10. Eocene ("Sables inferieurs"), Paris Basin, France. Not turbonillid but *Syrnola*. See also Gougerot, 1967, p. 105, fig. 25 (*Syrnola*).

obliqua Lovén, 1846, *Turbonilla*, no data, non vidi. See *divisa* J. Adams, 1797. Not turbonillid, but odostomiid (*Evalea*). [Not *Turbonilla obliqua* Degrange-Touzin, 1895. See there].

obliqua Degrange-Touzin, 1895, *Turbonilla*, p. 400, pl. 9, figs. 4, 4a. Miocene (Helvetien) of Sallespisse, southern France. An earlier name, but insufficiently described and thus not considered to be valid is *Chemnitzia warringtoni*. A. Bell, 1893, p. 628, really a nomen nudum from the Pliocene of St. Erth, Cornwall. See also Harmer, 1920, p. 565.

obliquata Philippi, 1844, *Chemnitzia*, p. 137, pl. 24, fig. 10. Recent, Sicily. See also Bucquoy, Dautzenberg and Dollfus, 1883, p. 182, pl. 20, fig. 14; Tryon, 1886, p. 324, pl. 75, fig. 80; Kobelt, 1905, p. 147, pl. 72, figs., 15-16; Cerulli-Irelli, 1914, p. 269, pl. 23, figs. 34-35. There are some "varieties": *Turbonilla obliquata azorensis*, Nordsieck, 1972, p. 124, no figure. Recent, Azores; *Turbonilla obliquata* var. *gallica* Sacco, 1892, Vol. 11, p. 81. New name for *T. obliquata* Philippi as reported by Bucquoy, Dautzenberg and Dollfus, 1883, p. 182, pl. 20, fig. 14. Recent, southern France; *Turbonilla obliquata* var., *plioligustica* Sacco, 1892, part, 11, p. 81, pl. 2, fig. 6. Pliocene of the Italian Piedmont; *Turbonilla obliquata* var. *transiens* Cerulli-Irelli, 1914, p. 269, pl. 23, figs. 34-35. Pliocene of Monte Mario, Italy. See also Fekih, 1969, p. 30, pl. 5, fig. 5. Pliocene of Tunisia. [Not *Turbonilla obliquata* Deshayes, 1864, p. 565, Atlas, pl. 21, figs. 24-25. See *compta* Deshayes, 1864].

obliquata Deshayes, 1864, *Turbonilla*, p. 565, Atlas, pl. 21, figs. 24-25. Eocene of France. See *compta* Deshayes, 1864.

obliquecostata Edwards, m. s, 1891, *Turbonilla* (in) Newton, 1891, p. 182. Upper Eocene (Barton Beds), Gr. Britain. See also Keeping and Tawney, 1881, p. 117 (*Turbonilla*). [Not *Turbonilla obliquecostata* Dautzenberg, 1912, p. 60, pl. 2, figs. 30-31. Recent, Port Etienne, West Africa].

obliquecostata Dautzenberg, 1912, *Turbonilla*, p. 60, pl. 2, figs., 30-31. Recent, Port Etienne, West Africa.

obliqueplicata Seguenza, 1880, *Turbonilla*, p. 265, no figure. Pliocene (Astien) of southern Italy.

oblita Deshayes, 1864, *Turbonilla*, p. 578, pl. 20, figs. 18-19. Eocene of Hérouval, Basin of Paris, France. Not turbonillid but *Megastomia*. See Cossmann, 1921, p. 242. See also Gougerot, 1969, p. 35, fig. 25.

obscura Reuss, 1867, *Turbonilla*, p. 159, pl. 7, figs. 5-7. Miocene of Wieliezka, Poland. See also Seguenza, 1880, p. 112, who classifies it as a *Eulimella*. [Not *Turbonilla* (*Careliopsis*) *obscura* Yokoyama, 1922, from the Pleistocene of Japan which also is not turbonillid.

obsoleta Seguenza, 1880, *Turbonilla brevis* var... See *brevis* Seguenza, 1880. [Not *Turbonilla puncta* var. *obsoleta* Dall, 1892. Pliocene of Florida, U. S. A.

oligocenica Sacco, 1892, *Turbonilla impressa* var... See *Turbonilla impressa* von Koenen, 1891.

oligocolpus Cossmann and Peyrot, 1917, *Pyrgostylus*, Vol, 69-70, p. 376, Atlas, 1919, pl. 10, figs. 65-66. Miocene of Saubrigues, southern France.

ornata Grateloup, 1830, *Melania*, non vidi. Miocene of southern France. See also Bronn, 1848, p. 714 and 1328 (*Turbonilla*). Later renamed *Chemnitzia subornata* by Orbigny, 1852 (exparte). [Not *Chemnitzia ornata* Orbigny, 1842, p. 221, Atlas, 1853, pl. 16, figs. 18-20. Recent, Cuba; nor *Turbonilla* ornata Gould, 1861, p. 406, no figure. Recent Hong Kong.

oscitans Lovén, 1846, *Turbonilla*, p. 91. Recent, Sweden. Not turbonillid, but *Odostomia* (=*Odostomia ambigua* Maton and Rackett, 1807).

pallaryi Dautzenberg, 1910, p. 141. New name for *Turbonilla stricta* Pallary, 1904, p. 236, pl. 7, fig. 17. Recent, Gulf of Gabes, Mediterranean. See also Ghisotti, 1972, p. 102, pl. 1, fig. 1, and *pallaryi* Nordsieck, 1972.

pallaryi Nordsieck, 1972, *Turbonilla* (*Chemnitzia*), p. 124, pl. 5, fig. 19. Unaware that Dautzenberg had renamed *T. stricta* Pallary, Nordsieck baptized it with the same name, but at the same time split it into two different species! See also *pseudostricta* Nordsieck, 1972.

pallida Philippi, 1836, *Melania*, p. 157, pl. 9, fig. 8. Recent, Mediterranean. See *striatulus* Linné, 1766.

pannonica Kokay, 1966, *Turbonilla*, p. 52 (110 in German text), pl. 6, fig. 13-15. Miocene (Tortonian) of Hungary.

parateretebralis Boettger, 1901, *Turbonilla* (*Pyrgolampros*), p. 109, No. 348. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 235, pl. 11, fig. 4, who classifies it as *Kleinella* (*Acteopyramis*).

parva Deshayes, 1864, *Turbonilla*, Vol. 2, p. 572, Atlas, pl. 20, figs. 22-23. Eocene of France. Is a *Syrnola*. See Gougerot,1967, p. 106, fig. 29. [Not *Turbonilla parva* Briart and Cornet, 1873, (see there); nor *Turbonilla parva* Degrange-Touzin, 1895 (see there)].

parva Briart and Cornet, 1873, *Turbonilla*, p. 15, pl. 6, figs. 10a, b. See *briarti* Cossmann, 1888.

parva Degrange-Touzin, 1895, *Turbonilla*, p. 399, pl. 9, figs. 3, 3a. Miocene of southern France.

parvoastensis Sacco, 1992, *Pyrgostelis percostatorufa* var... Vol. 12, p. 6, pl. 2, fig. 130 (in Vol. 11). See *Turbonilla percostatorufa* Sacco, 1892.

parvogallica Sacco, 1892, *Turbonilla*, Vol. 11, p. 72, no figure. See *Turbo lacteus* Linné, 1758.

parvula Dunker, non vidi. Reported by Bittner, 1884, p. 472 (*Turbonilla*). [Not *Turbonilla parvula* Harmer, 1920. See there].

parvula Harmer, 1920, *Turbonilla*, p. 566, pl. 49, figs. 22-23. Pliocene of St. Erth, Gr. Britain. [Not *T. parvula* Dunker].

paucicostata Seguenza, 1876, *Turbonilla*, p. 92, no figure. See *Turbo lacteus* Linné, 1758.

paucicostatobrunnea Sacco, 1892, *Turbonilla lactea* var..., Vol. 12, p. 75, no figure. See *Turbo lacteus* Linné, 1758.

paucicostellata Sacco, 1892, *Turbonilla pseudocostellata* var..., Vol. 12, p. 77, pl. 2, fig. 63 (in Vol. 11). See *scala* Eichwald, 1853.

paucidecussata Sacco, 1892, *Pyrgostelis rufa* var..., Vol. 12, p. 5, pl. 2, figs. 123 (in Vol. 11). See *crenata* Brown, 1827.

paucistriata Jeffreys (1873), 1884. *Odostomia* (*Turbonilla*) p. 112 where it is a nomen nudum, but validated by Jeffreys in 1884, p. 361, pl. 27, fig. 6 (*Odostomia*). According to Nordsieck, 1972, p. 128 it is a *Cylindriturbonilla*. Recent, Mediterranean. See also Kobelt, 1905, p. 152, pl. 72. fig. 10, (*Turbonilla*) and Harmer, 1920, p. 561, pl. 49, fig. 11 (*Turbonilla*). Very close to *Turbonilla compressa* Jeffreys, 1884 and *Turbonilla semicostata* Jeffreys, 1884. There is a "variety": *Pyrgolampros paucistriatus* var. *dertonensis* Sacco, 1892, Vol. 11, p. 91, pl. 2, fig. 103. Miocene of the Italian Piedmont.

paucisulcata Sacco, 1892, *Pyrgostelis bilineata* var..., Vol. 12, pl. 2, fig. 138 (in Vol. 11). See *bilineata* Seguenza, 1876.

paullula Jeffreys, 1867, *Odostomia lactea* var..., Vol. 4, p. 165, no figure. See *Turbo lacteus* Linné, 1758.

pauperata Locard, 1897, *Turbonilla*, Vol. 1, p. 437, pl. 19, figs. 14-15. Recent, off Portugal in 1205 m. See also Nordsieck, 1972, p.129, pl. 6, fig 3a. [*Turbonilla* (*Magniturbonilla*)].

peracuta Boettger, 1906, *Pyrgulina* (*Dunkeria*), p. 122, No. 428. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 244, pl. 13, fig. 7, holotype. [*Turbonilla* (*Dunkeria*)].

percostatoastensis Sacco, 1892, *Pyrgostyelis rufa* var..., Vol. 12, p. 5, pl. 2, fig. 126 (in Vol. 11). See *crenata* Brown, 1827).

percostatorufa Sacco, 1892, *Pyrgostelis*, Vol. 12, p. 6, pl. 2, fig. 129 in Vol. 11. Pliocene of the Italian Piedmont. See also Fekih, 1969, p. 37, pl. 7, fig. 3. (Pliocene of Tunisia).

percostellata Sacco, 1892, *Turbonilla*, Vol. 11, p. 79, pl. 2, fig. 68. Miocene (Tortonian), Monte Gibbio, Italy.

perelongata Fekih, 1969, *Turbonilla*, p. 29, pl. 5, fig. 4. Pliocene of Tunisia.

perlata Requien, 1848, *Chemnitzia*, p. 59. Probably *Chrysallida interstincta* (Montagu, 1803). If so not turbonillid.

perplicatosulcata Sacco, 1892, *Turbonilla lactea* var..., Vol. 11, p. 74, fig. 49. See *Turbo lacteus* Linné, 1758.

periplicatotorquatus Sacco, 1892, *Pyrgolampros*, Vol, 11, p. 88, pl. 2, fig. 93. Miocene (Tortonien) of Stazzano, in the Italian Piedmont. Possibly the same as *Pyrgolampros mioperplicatulus* Sacco, 1892.

persulcata Sacco, 1892, *Pyrgostelis bilineata* var..., Vol. 12, p. 8, pl. 2, fig. 136 (in Vol. 11) (number 135b on plate). See *bilineata* Seguenza, 1876.

perventricosa Fekih, 1969, *Turbonilla* (*Pyrgostelis*), p. 40, pl. 7, fig. 12. See *crenata* Brown, 1827.

phaula Dautzenberg and Fisher, 1896, *Turbonilla*, p. 469, pl. 20, fig. 7. Recent Azores at 1385 m. Not turbonillid. See also Kobelt, 1905, p. 168, pl. 74, fig. 27, [*Eulimella* (*Baudonia*)] and Nordsieck, 1972, pl. 5, fig. 4 (*Eulimella*).

philomelae Watson, 1886, p. 490, pl. 32, fig. 2. Recent, off Nightingale Island, Tristan da Cunha.

pictavicensis Peyrot, 1938, *Pyrgostylus*, p. 96, no figure. Miocene of Mirabeau (Poitou), France.

placentina Sacco, 1892, *Pyrgostelis pyrgostyloides* var..., Vol. 12, p. 7,no figure. See *Pyrgostelis pyrgostyloides* Sacco, 1892. [Not *Pyrgostylus lancaea* var. *placentina* Sacco, 1892. See there].

placentina Sacco, 1892, *Pyrgostylus lanceae* var..., Vol. 12, p. 10, no figure. See *lanceae* Libassi, 1859.

planiscula Pantanelli, 1884. *Turbonilla terebraeformis* var..., non vidi. See *terebraeformis* Meneghini.

plicatella Edwards m.s., *Turbonilla*, non vidi. See Keeping and Tawney, 1881, p. 116. (*Turbonilla*).

plicatilis Edwards m. s. *Turbonilla*, non vidi. See Keeping and Tawney, 1881, p. 116, (*Turbonilla*).

plicatulus Brocchi, 1814, *Turbo*, Vol. II, p. 376, pl. 7, fig. 5, type lost, fide Rossi Ronchetti, 1953, p. 154, Italian Tertiary of San Giusto. Pliocene of Western Europe. Listed by many workers but seldom figured f. i. Hoernes, 1856, p. 503, pl. 43, fig. 33. [Not *Turbonilla plicatula* Risso, 1826, p. 224, which under the name *Turbonilla typica* Dall and Bartsch, 1903, is considered by many workers the genotype of *Turbonilla*]. Synonyms of *plicatulus* Brocchi, 1814, are: *Pyrgolampros angloplicatulus* Sacco, 1892, Vol. 11, p. 85, Pliocene of Great Britain, which is a new name for *Chemnitzia plicatula* Brocchi as given by S. V. Wood, 1872, p. 61, pl. 7, fig. 3; *philippii* Doderlein, non vidi, genus designation unknown to me. See Gottsche, 1876, p. 29, and Gottsche, Festschrift and also Semper, 1861, p. 195; *Turbonilla* (*Strioturbonilla*) *plicatulasenensis* Sacco, 1892, Vol. 11, p. 95, pl. 2, fig. 114. Pliocene of the Italian Piedmont. See also Fekih, 1969, p. 33, pl. 5, fig. 10, as *Turbonilla* (*Strioturbonilla*); *Pyrgolampros teutonoplicatula* Sacco, 1892, Vol. 11, p. 86. Miocene of Germany. New name for *T. plicatula* Brocchi as reported by von Koenen, 1882, p. 256, pl. 6, fig. 6.

plicatula Risso, 1826, *Turbonilla*, p. 224. Recent, Mediterranean. See *typica* Dall and Bartsch, 1903. This is by many considered the valid genotype of *Turbonilla*. See also remarks under *costellata* Risso, 1826.

plicatulasenensis Sacco, 1892, *Turbonilla* (*Strioturbonilla*), Vol. 11, p. 95,pl. 2, fig. 114. See *plicatula* Brocchi, 1814.

plioastensis Sacco, 1892, *Strioturbonilla densecostata* var..., Vol. 11, p. 96, pl. 2, fig. 115. See *crenata* Brown, 1827.

pliocolligens Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 88, pl. 2, fig. 95. Piacenziano of the Italian Piedmont.

pliocostellatoides Sacco, 1892, *Turbonilla*, Vol. 11, p. 77, pl. 2, fig. 64. See *Turbonilla costellata* Grateloup, 1827.

pliogigantea Sacco, 1892, *Turbonilla lactea* var..., Vol. 11, p. 74, pl. 2, fig. 54. See *Turbo lacteus* Linné, 1758.

plioligustica Sacco, 1892, *Turbonilla obliquata* (?) var..., Vol. 11, p. 81, pl. 2, fig. 6. See *obliquata* Philippi, 1844.

pliomagna Sacco, 1892, *Turbonilla postacuticostata* var..., Vol. 11, p. 76, pl. 2, fig. 60. See *postacuticostata* Sacco, 1892.

plioparvillima Sacco, 1892, *Turbonilla pusilla* (?) var..., Vol. 11, p. 83, pl. 2, fig. 81. See *pusilla* Philippi, 1844.

pliopercostata Sacco, 1892, *Pyrgisculus scalaris* var..., Vol. 11, p. 71, pl. 1, fig. 118. See *scalaris* Philippi, 1836.

pliopseudogracilis Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 90, pl. 12, fig. 101. See *spiculum* Eichwald, 1853.

pliopupoides Sacco, 1892, *Pyrgolampros* (?), Vol. 11, p. 92, pl. 2, fig. 106. Pliocene (Astien) of the Italian Piedmont. See Pavia, 1975, p. 165, , figs. 9-10, [*Turbonilla* (*Pyrgolampros*)].

pliosigmoidea Sacco, 1892, *Turbonilla lactea* var..., Vol. 11, p. 74, pl. 2, fig. 48. See Turbo lacteus Linné, 1758.

pliosimilis Sacco, 1892, *Turbonilla lactea* var..., Vol. 11, p. 74, pl. 2, fig. 48. See *Turbo lacteus* Linné, 1758.

pointeli de Folin, 1869, *Turbonilla*, Fonds de la Mer, Vol. 1, p. 100, pl. 11, fig. 4. Not turbonillid, but the same as *Turbo nitidissimus* Montagu, 1803, which is *Anisocycla*; Pliocene to Recent, Europe.

polygyrata Deshayes, 1864, *Turbonilla*, Vol. 2, p. 578, pl. 21, figs. 7,8, Eocene of Paris Basin France. Is *Symola*. See also Cossmann and Pissarro, 1910-13, pl. 6, fig. 43-10, (*Symola*); Cossmann, 1921, p. 227, pl. 5, figs. 21-22; and Gougerot, 1967, p. 105, fig. 26, (*Symola*). There are possibly three species called *polygyratum*, which are not always clearly separated by their reporters. Two others are:

polygyrata Dautzenberg, 1912, *Eulimella*. Recent, French Guinea.

polygyrata Deshayes, 1864, *Aciculina*, which is a *Belonidium* from the Eocene of the Paris Basin.

postacuticostata Sacco, 1892, *Turbonilla*, Vol. 11. p. 76, no figure. New name for *acuticostata* Jeffreys, 1884, (non Speyer, 1871), Rasel Amoush, Mediterranean. Recent. See also Harmer, 1920, p. 562, pl. 49, fig. 13. Synonyms are: *Odostomia acuticostata* Jeffreys, 1871 p. 359, pl. 27, fig. 2. (Jeffreys, 1873, p. 112 is a nomen nudum). Recent, Mediterranean. Also Gulf of Biscay and Pliocene of Great Britain. See also Kobelt, 1905, p. 152, pl. 72, fig. 1; *Turbonilla postacuticostata ligustica* Sacco, 1892, Vol. 11, p. 76, pl. 2, fig. 59. Italian Tertiary (Piacenziano of Savona). See also Almera and Bofill, 1898, p. 56; *Turbonilla mirifica* Pallary, 1904, *Turbonilla*, p. 237, pl. 7, fig. 6. Recent, Sfax, Mediterranean. See also Nordsieck,

1972, p. 123, pl. 5, fig. 17, [*Turbonilla* (*Chemnitzia*)]; *Turbonilla* (*Chemnitzia*) *mirifica major* Nordsieck, 1972, p. 123. Recent, Sfax, Tunisia.

potamoides Cantraine, 1835, *Turritella*, non vidi. See *striatulus* Linné, 1766.

praecedens Sacco, 1892, *Pyrgostylus rufa* var..., Vol. 12, p. 3, pl. 2, fig. 117. See *vidali* Cossmann, 1921. [Not *Turbonilla pusilla* (?)*pracedens* Sacco, 1892, for which see next text entry].

pracedens Sacco, 1892, *Turbonilla pusilla*(?) var. *rufa*, Vol. 11, p. 83, pl. 2, fig. 78. See *pusilla* Philippi, 1836.

praecincta Doderlein, 1862, *Turbonilla*, no data, non vidi. Cited by Sacco, 1890, as No. 5357 for the Tortonian of the Piedmont Basin, Italy.

praeclara Boettger, 1906, *Turbonilla* (*Pyrgolampros*), p. 126, No. 440. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 243, pl. 12, fig. 40.

praelonga Deshayes, 1864, *Turbonilla*, Vol. 2, p. 577, Atlas, pl. 27, figs. 17-18.

prostriatulolanceae Sacco, 1892, *Pyrgostylus*, Vol. 12, p. 10, pl. 2, fig. 144 (in Vol. 11). Miocene (Tortonian) of the Italian Piedmont. Cossmann, 1921, p. 294, has *poststriatulolanceae* (sic!). See also Fekih, 1969, p. 44, pl. 9, fig. 4. There is a "variety", by some workers considered as a separate species: *Pyrgostylus poststriotulolanceae* var., *lanceaeoides* Sacco, 1892, Vol. 12, p. 11, pl. 12, fig. 145 (in Vol. 11). Tortonian of Monte Gibbio, Italy. See also Fekih, 1969, p. 45, pl. 9, fig. 13.

pseudoauricula Grateloup, 1827, *Auricula*, Vol. 2, p. 108, no figure. Figure in Grateloup, 1840, plate Plicacées, figs. 75-76. Miocene of southern France. See also Cossmann and Peyrot, 1917, p. 162, pl. 9, figs. 98-100 and Voorthuysen, 1944, p. 38, pl. 13, figs. 9-14, [both as *Turbonilla* (*Pyrgolampros*)].

pseudocostellata Sacco, 1892, *Turbonilla*, Vol. 11, pl. 2, fig. 61. See *scala* Eichwald, 1853.

pseudocostellatoides Peyrot, 1938, *Turbonilla*, p. 63. See *scala* Eichwald, 1853.

pseudoflorentina Sacco, 1892, *Turbonilla lactea* anom..., Vol. 11, p. 75, pl. 2, fig. 55. See *lacteus* Linne, 1758.

pseudogracilis Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 91. See *spiculum* Eichwald, 1853.

pseudogradata Nordsieck, 1972, *Turbonilla* (*Graciliturbonilla*), p. 126, pl. 5, fig. 25. New name for *Turbonilla gradata* Monterosato m. s. Recent, Mediterranean. [Non Bucquoy, Dautzenberg and Dollfus, 1883].

pseudostricta Nordsieck, 1872, *Turbonilla* (*Cyrtoturbonilla*), p. 124, pl. 5. New name for *T. stricta* Pallary, 1904, p. 236, pl. 7, fig. 17. Recent, Sfax, Tunisia. [Non *stricta* Verrill, 1873, p. 659, nor *stricta* Clessin, 1900, p. 168, China].

pseudoterebralis Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 88, pl. 2, fig. 94. Miocene of Monte Gibbio, Italy and Western Europe. Figures have been given by Kautsky, 1925; Glibert, 1952; Friedberg, 1954; Sorgenfrei, 1958; Anderson, 1964; and Nordsieck, 1954. A "variety" is *Pyrgolampros pseudoterebralis* var., *explicatula* Sacco, 1892, Vol. 11, p. 88. New name for *Turbonilla plicatula* Brocchi, 1814, as figured by Hoernes, 1856, p. 326, pl. 48, fig. 289.

pulchra Deshayes, 1864, *Turbonilla*, p. 567, Atlas, pl. 20, figs. 24-25. See *Melania tenuiplica* Deshayes, 1824. [Not *Turbonilla pulchra* Clessin, 1900, p. 171, pl. 35, fig. 6. Recent, Jamaica].

pumila Seguenza, 1876, *Turbonilla*, p. 92, New name for *Odostomia pusilla* Jeffreys (non Philippi, 1844). For Jeffreys see: Jeffreys, 1867, Vol. IV, p. 167 and 1869, Vol. V, p. 25, pl. 76, fig. 4.

punctata Tate, 1870, *Chemnitzia*, no further data. non vidi. See also Cossmann, 1900, p. 46.

pupaeformis Milaschewitch, 1916, no further data, non vidi. See *pusilla* Philippi, 1844.

pusilla Philippi, 1844, *Chemnitzia*, p. 224, pl. 28, fig. 21. Recent, Tarente, Italy. Reported by many, f. i,.Bucquoy, Dautzenberg, and Dollfus, 1883, pl. 20, fig. 16; Kobelt, 1905, p. 141, pl. 73, fig. 5, and pl. 74, figs. 18-23; Cerulli-Irelli, 1914, p. 269, pl. 23, figs. 36-40; Nordsieck, 1972, p. 125, pl. 5, figs. 20-21 made it the type of *Cyrtoturbonilla*. Miocene-Recent, Western Europe. Opinions about synonyms (related species?) and "varieties" vary widely. We cite most of these here: *Turbonilla pusilla* var. *conicina* Sacco, 1892, part 11, p. 83, pl. fig. 80. Pliocene of the Italian Piedmont; *Odostomia pusilla cylindrata* Marshall, 1893, p. 255. Recent, Jersey and Great Britain. See also Nordsieck, 1972, p. 125; *Auricula gracilis* Grateloup, 1827, p. 108, No. 81. Miocene of southern France. See also Grateloup, 1838, Vol. X, p. 281, pl. 6, figs. 73-74, (Acteon) and Grateloup, 1840, plate Plicacéens, fig. 73-74 (*Auricula*); *Odostomia* (*Turbonilla*) *elegantissima gradata* Monterosato, 1878, p. 94. Recent, Palermo. See also Marshall, 1894, p. 385, (*Odostomia innovata* var...) and Kobelt, 1905, p. 140, pl. 74, figs., 2-4. Recent; *Turbonilla pusilla gradatoides* Sacco, 1892, Vol. 11, p. 83, pl. 2, fig. 79. Pliocene of the Italian Piedmont; *Odostomia pusilla* var. *grossa* Marshall, 1894,

p. 384, no figure. Recent, northern Gr. Britain. See also Harmer, 1920, p. 564, pl. 49, fig, 15. Many consider this identical with *Odostomia sinuosa* Jeffreys, 1884, which Nordsieck, 1972, classifies as a *Graciliturbonilla*; *Turbonilla innovata* Monterosato, 1884, p.92. Recent, Mediterranean. See also Kobelt, 1905, p. 143, pl. 74, fig. 12; *Odostomia pusilla minuscula* Marshall, 1891, p. 347, no figure. Recent, Great Britain; *Odostomia innovata* var. *nana* Marshall, 1891, p. 347, no figure, Recent, Guernsey in 20 fms. By some considered identical with *Turbonilla semicostata* de Folin from Alger, non vidi and unknown to me; *Turbonilla pusilla plioparvillima* Sacco, 1892, Vol. 11, p. 83, pl. 2, fig. 78. Miocene (Elveziano) of the Italian Piedmont; *pupaeformis* Milaschewitch, 1916, no data, non vidi. See Parenzan, 1970, p. 125, pl. 24 (poor figure) and Nordsieck, 1972, p. 125; *Turbonilla pusilla* var. *rectogallica* Sacco, 1892, Vol. 11, p. 82, no figure. New name given to material described by Bucquoy, Dautzenberg, and Dollfus, 1883 from Rousillon, France. See also Kobelt, 1905, p. 143, pl. 72, fig. 23 and Nordsieck, 1972, p. 128, pl. 6, fig. 1, [*Turbonilla* (*Variturbonilla*)]; *Rissoa turritella* Scacchi, p. 15, non vidi. See Tryon, 1886, p. 322 (*Turbonilla*).

pyramidalis Sacco, 1892, *Pyrgostylus striatulolanceae*..., Vol. 12, p. 10, pl. 2. fig. 142. Tertiary of Italy.

pyrgidium Tomlin and Shackleford, 1915, *Turbonilla*, p. 309, pl. 5, fig. 3. Recent, St. Thomee, West Africa.

pyrgostyloides Sacco, 1892, *Pyrgostelis* (?), Vol. 12, p. 7, No figure. Miocene of Stazzano, Italian Piedmont. There is a "variety": *Pyrgostelis pyrgostyloides* var. *placentina* Sacco, 1892. Piacenziano of the Italian Piedmont.

raphidiopsis Cossmann and Peyrot, 1917, *Turbonilla* (*Strioturbonilla*), p. 358, Atlas, 1919, pl. 9, figs. 93-94. Miocene of Léognan, southern France. See also Cossmann, 1921, p. 281, pl. 6, fig. 56.

recta Etheriidge and Bell, 1898, *Chemnitzia* (in) A. Bell, 1898, p. 147. See *gracilis* Brocchi, 1814. [Not *Turbonilla* (*Pyrgiscus*) *recta* Dall and Bartsch, 1909, p. 85, pl. 7, figs. 12, 12a. Recent, Lower California].

recticosta Turbonilla, no data, non vidi. Weinkauff, 1865, p. 184, No. 54. cites this species without giving either author or source. I have not found the pertinent data.

rectogallica Sacco, 1892, *Turbonilla pusilla* var..., See *pusilla* Philippi, 1844.

recticulata Dubois, 1831, *Melania*, p. 47, pl. 31, figs. 126-127, which may be a *Turbonilla*. Miocene of Poland. See also Orbigny, 1852, Vol. III, p. 33 (*Chemnitzia*). [Not *Turbonilla reticulata* Chemnitz, no data non vidi. See also Doderlein, 1862, p. 17 and Sacco, 1892, p. 9. (*Turbonilla*); nor *Chemnitzia reticulata* C. B. Adams, 1850, p. 75. Recent, Jamaica; nor *Dunkeria reticulata* A. Adams, 1860, p. 422, no figure. Recent, Japan, wich is not pyramidellid but is a *Clathrofenella*; nor *Chemnitzia reticulata* Emmons, 1858, p. 179 (270), fig. 156a. Miocene of North Carolina.

reticulata Chemnitz, no data, non vidi. See Doderlein, 1862, p. 17 and also Sacco, 1892, p. 9, (*Turbonilla*).

reussi Hoernes, 1856, *Chemnitzia*, p. 541, pl. 43, figs. 20a-d. See *spiculum* Eichwald, 1853.

rigacci Conti, 1864, *Chemnitzia*, p. 30 and 50. Not turbonillid. Is *Tragula fenestrata* Forbes, 1848.

rosea Monterosato, 1877, *Turbonilla*, p. 40. Recent, Mediterranean. See also Kobelt, 1905, Vol. III, p. 160, pl. 74, figs. 7-11. [*Turbonilla* (*Pyrgolidium*)] and Harmer, 1920, p. 574, pl. 49, fig. 39 and Nordsieck, 1972, p. 130, pl. 6, fig. 11. It is curious that von Maltzan gave the species exactly the same name.

rosea von Maltzan, 1885, *Turbonilla*, p. 28. Recent, Senegal. See also Pasteur-Humbert, 1962, p. 55 and 202, fig. 80, who is of the opinion that Maltzan has priority over Monterosato. However it is probable that the valid name of the species will be *Chemnitzia corbis* Conti, 1864, described from the Pliocene of Monte Mario, Italy. Another synonym is *Chemnitzia calameli* Jousseaume, 1876. Recent, Djijelli (Algeria).

rudis "Charlesworth" Wrigley, 1944, *Chemnitzia*, p. 61, no figure. Eocene of Great Britain. Possibly preoccupied by the older name *Melania costata* J. Sowerby, 1819.

ruelensis de Raincourt, 1885, *Turbonilla*, p. 470, pl. 15, figs. 3, 3a. Eocene of Le Ruel, France. The original spelling is with a single "l", but all subsequent authors have followed Cossmann, 1888, p. 97 and spell *ruellensis* with double "l". See also Cossmann and Pissarro, 1910-12, pl. 6, fig. 43-20 (*Syrnola*). Not turbonillid but *Syrnola*.

rufa Philippi, 1836, *Melania*, p. 156, pl. 9, fig. 7. Recent, Mediterranean. See *crenata* Brown, 1827.

rufa d' *Orbigny*, *Chemnitzia*, no data, non vidi. Cited by Dall 1885, p. 71. Possibly an error.

rufescens Forbes, 1846, *Chemnitzia*, p. 66, Mediterranean, Recent. See *scalaris* Philippi, 1836.

rugosa de Folin, 18.., *Turbonilla*, Fonds de la Mer, pl. 29, fig. 3. Recent, West Africa (Cape Verga). See also Tryon, 1886, p. 327, and Kisch, 1959, p. 104.

rugulosa S. V. Wood, *Chemnitzia*,Supplement, part I, pl. 61, pl. 4, fig. 15. Pliocene (Red Crag), Gr. Britain. Cossman, 1921, p. 232 lists it as *Elusa*.

saccoi Cossmann and Peyrot, 1917, *Turbonilla*, p. 356, Atlas, 1919, pl. 9, figs. 84-86; pl. 10, figs. 62-63. Miocene of southern France. Possibly the same as *Turbonilla pseudocostellata*, Sacco, 1892.

sallomacensis Cossmann, and Peyrot, 1917, *Pyrgostylus*, p. 375, Atlas, 1919, pl. 10, figs. 12-13, and fig. 64. See *lanceae* Libassi, 1859. [Not *Turbonilla* (*Pyrgolidium*) *sallomacensis* Cossmann and Peyrot, 1917. (See there).

sallomacensis Cossmann and Peyrot, 1917, *Turbonilla* (*Pyrgolidium*), p. 364, pl. 10, figs. 89-89a. Miocene (Helvetien) of Salles, France.

sandbergeri Bosquet, 1859, *Turbonilla*, p. 16, pl. 2, figs. 3a-c. Oligocene of south Limburg, the Netherlands. Not turbonillid, but *Syrnola*. See also Speyer, 1871, p. 57, pl. 10, figs. 13, 13a and 14, 14a, and Görges, 1952, p. 76, pl. 2, figs. 57 and 58 (*Syrnola*). [Not *Turbonilla sandbergeri* Deshayes, 1864].

sandbergeri Deshayes, 1864, *Turbonilla*, p. 573, Atlas, pl. 21, figs. 14-15. Oligocene of Basin of Paris, France. Was renamed *sinuata* by Speyer, 1871. See there.

saucatsensis Cossmann and Peyrot, 1917, *Turbonilla* (*Pyrgostelis*) p. 368, Atlas, 1919, pl. 10, figs. 3-4. Miocene (Burdigalien) of Saucats, France.

scala Eichwald, 1853, *Eulima*, p. 264-265, pl. 10, fig. 6. Miocene of Russia (now Poland). See also Friedberg, 1928, Vol. 1, p. 448-450, pl. 27, figs. 15 and 17 (not 16), (*Turbonilla*); and Freidberg, 1954, p. 454, pl. 27, figs. 15-17. [Not *Chemnitzia scala* Laws, 1937,p. 65, figs. 26 and 38. Recent, off Oamaru, New Zealand in 50 fms.]. There are many species very closely related to *scala* Eichwald, 1853. Possibly most of these are synonyms. They are: *Turbonilla costellatoides* Sacco, 1892, Vol. 11, p. 78, fig. 65. Miocene of Monte Gibbio, Italy. See also Kokay, 1966, pl.6, fig. 12; *Turbonilla costellatoides* var. *antigua*, Sacco, 1892, Vol. 11, p. 78, pl. 2, fig. 66. Elveziano of the Italian Piedmont. See also Cossmann, 1921, 280, pl. 6, figs. 92-94; *Turbonilla* (?) *costellatosulcata* Sacco, 1892, Vol. 11, p. 79, pl. 2, fig. 70. Miocene of Monte Gibbio, Italy; *Turbonilla costellatoides* var. *dertocolligens* Sacco, 1892,

Vol. 11, p. 78, pl. 2, fig, 67. Miocene of Stazzano, Italy; *Turbonilla pseudocostellata* Sacco, 1892, Vol. 11, p. 77, pl. 2, fig. 61. Miocene of the Italian Piedmont. See also Kautsky, 1925, p. 75 and Staesche, 1930, p. 71, and Fekih, 1969, p. 32, pl. 6, fig. 1 and Caprotti, 1974, p. 36. [*Turbonilla* (*Chemnitzia*)]; *Turbonilla pseudocostellata* var. *hoernesiana* Sacco, 1892, Vol. 11, p. 77. Miocene (Tortonian) of Monte Gibbio, Italy. See also Cerulli-Irelli, 1914, p. 268, pl. 23, figs. 30-31 and Cseprighi-Mesnerics, 1956, p. 432, pl. 3, figs. 21-22 and Fekih, 1969, p. 28, pl. 4, fig. 13, (as variety of *T. lacteus*); *Turbonilla pseudocostellata* var. *koeneniana* Sacco, 1892, Vol. 11, p. 77. New name for *Turbonilla costellata* Grateloup as reported by von Koenen, 1882, for northern Germany. See also Anderson, 1964, p. 325, p. 48, fig. 28 and Janssen, 1972, p. 60, p. 11, fig. 9; *Turbonilla pseudocostellata* var. *paucicostellata* Sacco, 1892, Vol. 12, pl. 2, fig. 63 (in Vol. 11). Miocene of Stazzano of the Italian Piedmont; *Turbonilla pseudocostellatoides* Peyrot, 1938, p. 63. Miocene of Port Levoy, France; *Turbonilla pseudocostellata.* var. *taurinensis,* Sacco, 1892, Vol. 11, p. 77, pl. 2, fig. 62. Miocene (Elveziano) of the Italian Piedmont.

scalariformis de Folin, 1884, *Dunkeria*, Fonds de la Mer, Vol. 4, p. 205, pl. 4, fig. 3. Recent, off Marocco in 2200 m, fide Kisch, 1959, p. 102. See also Locard, 1897, p. 442. [Not *Turbonilla scalariformis* Seguenza, 1880, p. 265, pl. 16, fig. 24, see there].

scalariformis Seguenza, 1880, *Turbonilla*, p. 265, pl. 16, fig. 24. Pliocene of southern Italy.

scalarioides Risso, 1826, *Turbonilla*, p. 107, fig. 41. See *crenata* Brown, 1827.

scalaris Philippi, 1836, *Melania*, Vol. I, p. 157, pl. 9, fig. 9. Recent, Sicily. Pliocene and Pleistocene of Italy. Recent in Western Europe. Reported and listed by many workers, f. i. Jeffreys, 1869, IV, p. 213, pl. 75, figs. 7, 8 (*Odostomia*); Sars, 1878, p. 360 (*Turbonilla*); Tryon 1886, p. 325, pl. 75, fig. 78 and pl. 74, fig. 65. *Turbonilla* (*Pyrgisculus*); Kobelt, 1905, Vol. III, p. 129, pl. 73, figs. 6 and 8, 20, 21; Dautzenberg and Durouchoux, 1913, p. 38, pl. 3, fig. 15; Nordsieck, 1972, p. 131, pl. 6, fig. 12 (*Dunkeria*); [Not *Chemnitzia scalaris* Velain, 1877. Recent. St. Paul, Indian Ocean, which occurs as nomen nudum in Velain, 1876. See also Kobelt, 1881, p. 22; nor *Turbonilla scalaris* Martin, 1884, p. 162, pl. 8, fig. 158. Lower Miocene of Ngembak, Java at 104-112 m in drill hole]. There are a number of synonyms and "varieties" which are:

Turbonilla (*Pyrgisculus*) *scalaris* var. *basidepressa* Sacco, 1892, fossil from the Italian Piedmont. Cossmann, 1921, p. 281 gives Cerulli-Irelli, 1914 as author (not correct); *Turbonilla* (*Pyrgisculus*) *scalaris* var. *brevis* Cerulli-Irelli, 1914, p. 276, figs. 65a and b, and 66. Pliocene of Italy; *Turbonilla* (*Dunkeria*) *scalaris* forma *dentata* Nordsieck, 1972, p. 102, and 244, fig. 66. Recent, Haifa, Israel; *Turbonilla* (*Dunkeria*) *scalaris* forma *elongata* Nordsieck, 1972, p. 131. Recent, Ibiza, Mediterranean; *Turritella indistincta* Fleming 1813 (?) non vidi. See Jeffreys, 1847, p. 311 and Tryon,1886, p. 325; *jeffreysi* (genus designation unknown to me), Forbes and Hanley, Vol.3, p. 251. According to Winckworth, 1932, p. 227 a *Pyrgisculus*. See also Fretter and Graham, 1949, p. 503, 509, 522, 523; *Turbonilla* (*Pyrgisculus*) *scalaris* var. *longiuscula* Cerulli-Irelli, 1914, p. 276, pl. 23, fig. 67. Pliocene of Monte Mario, Italy. See also Fekih, 1969, p. 47, pl. 9, fig. 8; *Chemnitzia rufescens* Forbes, 1846, p. 66. Recent Mediterranean. See also Forbes and Hanley, 1853, Vol. III, p. 251, pl. 94, fig. 1 and Sowerby, 1887, pl. 16, fig. 8. Also Kobelt, 1905, p. 130, pl. 71, figs. 19,20, [*Parthenina*) (*Pyrgostelis*)]. Recent, Scandinavia to Morocco. Possibly a good species; *Pyrgisculus scalaris* var.*pliopercostata* Sacco, 1892. Vol. 11, p. 71, pl. 1, fig. 118. Pliocene of the Italian Piedmont; *Pyrgisculus scalaris* var. *subfasciolata* Sacco, 1892, Vol. 11, p. 71, pl. 1, fig. 19. Pliocene of the Italian Piedmont.

scalariuscula Almera and Bofill, 1898, *Turbonilla*, p. 57, pl. 5, fig. 9. Pliocene of Catalonia.

scalaroides Nordsieck, 1972, *Turbonilla* (*Pyrgiscus*) *formosa...*, p. 130.See *formosa*, Jeffreys, 1848 [Not *Turbonilla scalaroides* Deshayes, 1864. See there].

scalaroides Deshayes, 1864, *Turbonilla*, p. 568, Atlas, pl. 21, figs. 9-10. Oligocene of Ormay, France. See also Cossmann and Lambert, 1884, p. 117, pl. 3, fig. 26.

scalata Schröder, Strombites, no data, non vidi. See Bronn, 1852, p. 295 (3rd ed.) (*Turbonilla*) and *Seebach*, 1861, (*Turbonilla*). Not pyramidellid, and see Bronn for synonymy.

scarabelliana Cocconi, 1873, *Chemnitzia*, p. 137, figs. 23-25. See. *lanceae* Libassi, 1859.

schlumbergeri Dautzenberg and Fischer, 1896, *Turbonilla*, p. 472, pl. 20, fig. 2. Recent, Azores in deep water. Not turbonillid (*Baudonia*). See Kobelt, 1905, p. 168, pl. 74, figs. 25-26, and Nordsieck, 1972, p. 120, pl. 5, fig. 7. (*Eulimella*).

secernenda Dautzenberg, 1912, *Turbonilla*, p. 60, pl. 2, figs. 32-33. Recent, Congo River Estuary, Africa.

selecta Boetteger, 1901, *Turbonilla* (*Pyrgostylus*), p. 112, No. 358, no figure, Miocene of Hungary. See also Zilch, 1934, p. 245, pl. 13, fig. 50.

semicostata Jeffreys, 1884, *Odostomia*, p. 361, pl. 27, fig, 7. Recent, Cape Breton, Gulf of Gascony. See also Kobelt, 1905, p. 154, pl. 72, figs. 2 and 3 (*Turbonilla*); and Nordsieck, 1972, p. 128, pl. 5, fig. 32 [*Turbonilla* (*Cylindriturbonilla*)]. [Not *Turbonilla* (*Pyrgolampros*) *semicostata* Kuster-Wendenburg, 1973, pl. 4, fig. 66. (see there)].

semicostata "Boettger" Kuster-Wendenburg, 1973, *Turbonilla* (*Pyrgolampros*), pl. 4, fig. 66 (no text). Oligocene, Mainzer Basin, Germany.

semidecussata Lamarck, Melania, no data, non vidi. Listed as *Chemnitzia* by Orbigny, 1852, Vol. III, p. 5.

semiglabra Clessin, 1902, *Turbonilla*, p. 258, pl. 41, (not 14 as printed), fig. 5. Recent. No locality given.

semilaevis Edwards, m.s. (in) Newton, 1891, *Turbonilla* p. 182, Oligocene, Headon Beds, Roydon, Gr. Britain.

semiplicata Edwards, m.s. (in) Newton, 1891, *Turbonilla*, p. 182. Middle Eocene (Bracklesham Beds) of Gr. Britain.

senegalensis von Maltzan, 1885, *Turbonilla*, p. 27. Recent, Gorée at 20 m. See also Dautzenberg, 1910, p. 141, pl. 3, figs. 8 and 9 and Nicklès, 1950, p. 71, text figure.

senensigastaldii Sacco, 1892, *Turbonilla lactea* var..., Vol. 11, p. 73, no figure. See *Turbo lacteus* Linné, 1758.

senensis de Stefani and Pantanelli, 1880, *Turbonilla*, non vidi. See Sacco, 1892, p. 95.

semistriata S. V. Wood, 1877,*Chemnitzia*, p. 120, no figure. Pliocene of Sutton, Gr. Britain. See also S. V. Wood, 1879, p. 24, pl. 2, fig. 20 and Altena, Bloklander and Pouderoyen, 1964, p. 6, pl. 21, No. 203.

separata Boettger, 1906, *Turbonilla* (*Pyrgostylus*), p. 134, No. 463. Miocene of Kostej, Hungary. See Zilch, 1934, p. 245, pl. 13, fig. 5, *Turbonilla* (*Mormula*) and Czeprighi-Mesnerics, 1956, p. 394, pl. 3, figs. 44, 45.

sigmoidea "Monterosato m.s." Jeffreys, 1884, *Odostomia*, p. 354, pl. 26, fig. 9. Jeffreys assigned it as type to *Strioturbonilla*. Dall and Bartsch, 1904 incorrectly cited *Strioturbonilla alpina* 1892, as type of *Strioturbonilla*. See also Nordsieck, 1972, p. 129, pl. 6, fig. 4, [*Turbonilla* (*Strioturbonilla*)] and Kobelt, 1905, p. 122, pl. 70, figs. 23-24 (*Parthenina*). Aartsen, 1975,

p. 232-33 and Aartsen, 1977, p. 54, fig,. 9, classifies it as *Chrysallida*. If this is correct *Strioturbonilla* is not turbonillid!

similis similis S. V. Wood, 1848, *Chemnitzia*, p. 84, pl. 10, figs. 11 a-c. See *filosa* S. V. Wood, 1848. [Not *Chemnitzia similis* C. B. Adams, 1952, p. 392. Recent, Panama; nor *Chemnitzia acicularis* var. *similis* Laseron, 1951. Recent, Australia; nor *Turbonilla elegantissima* var. *similis* Monterosato, 1878. See there].

similis Monterosato, 1884, *Turbonilla elegantissima* var... See *Turbo lacteus*, Linné, 1758.

simillimus Montagu, 1803, *Turbo*, p. 136. See *crenata* Brown, 1827.

simulans Pantanelli, 1884, no data, non vidi. Pliocene of Italy. See Sacco, 1892, Vol, 12, p. 5. This may be *Turbo crenata* Brown, 1827.

sinuata Speyer, 1871, Turbonilla (Syrnola). New name for *T. sandbergeri* Deshayes (non Bosquet). Oligocene of Paris Basin. Not turbonillid (Syrnola).

sinuosa Jeffreys, 1884, *Odostomia*, p. 358, pl. 27, fig. 1. Recent, no precise location given. See also Tryon, 1886, p. 322, pl. 75, fig. 84 (*Turbonilla*); Kobelt, 1905, p. 148, pl. 72, fig. 11, (*Turbonilla*); and Nordsieck, 1972, p. 126, pl. 5, fig. 26, [*Turbonilla* (*Graciliturbonilla*)].

smithii Verrill, 1881, *Turbonilla*, p. 380, no figure. See *T. unifasciata* Forbes, 1884, which is an *Eulimella* and is not turbonillid, but is often reported as *Turbonilla*.

sorella Edwards, m.s. (in) Newton, 1891, *Turbonilla*, p. 182. Oligocene of Gr. Britain. (Isle of Wight).

speciosa H. Adams, 1869, *Turbonilla*, p. 274, pl. 17, fig,. 11. See *macandreae* H. Adams, 1870.

spectabilis Monterosato, 1884, *Pyrgostelis*, p. 90, no figure. See *crenata* Brown, 1827.

spelta von Koenen, 1891, *Turbonilla*, p. 626, pl. 43, figs. 3a-b and 4a-b. Lower Oligocene of Germany.

speyeri Semper, 1861, *Turbonilla*, p. 358. See *Pyramidella subulata* Merian, 1850. [Not *Turbonilla speyeri* Koch and Wiechmann, 1872, see there].

speyeri Koch and Wiechmann, 1872,*Turbonilla*, p. 97. Miocene of Northern Germany. In 1861 Semper described *Turbonilla ino*. Speyer later reported another species under that name. Because the original *T. ino* Semper is *T. subulata* Merian, 1850, and also because *T. speyeri* Semper is *T. subulata*. Merian, Koch and Wiechmann state that the name *speyeri* is again again available for the unnamed *T. ino* Speyer (non Semper).

spiculoides Cossmann and Peyrot, 1917, *Turbonilla*, p. 353, Atlas (1919),pl. 9, figs. 89-90. Miocene of southern France. See also Steiniger, Ctyroky. et. al., 1971, p. 386, pl. 52, fig. 8. Possibly identical with *Turbonilla korytnicensis* Friedberg, 1938, p. 64, fig. 14 (in text), of the Miocene of Korytnica, Poland.

spiculum Eichwald, 1853, *Eulimella*, p. 265, pl. 10, fig. 7. Miocene of Russia (now Poland). See also Friedberg, 1954, p. 455, pl. 27, fig. 18. Friedberg, 1938, p. 63 (*Turbonilla*), states that *T. gracilis* Brocchi, 1814 as identified by Reuss, is this species. [Not *Turbonilla spiculum* Deshayes, 1864, p. 575, Atlas, pl. 21, figs. 1, 2. Eocene of France (see there)]. There are probably many synonyms but none have been so far verified. Some are: *Turbonilla facki* von Koenen, 1882, p. 252, pl. 6, figs. 14a, b. Miocene of Stolpe, Germany. See also Czepreghi-Mesnerics, 1950, p. 39-40 and Czepreghi-Mesnerics, 1956, p. 432, pl. 3, figs. 23-24 [*Turbonilla* (*Pyrgolampros*)]; *Pyrgolampros pseudogracilis* Sacco, 1892, Vol. 11, p. 91. New name for *Turbonilla gracilis* Brocchi, 1814, as reported by Hoernes, 1856, p. 498, pl. 43, figs. 28 a, b; *Chemnitzia reussi* Hoernes, 1856, p. 541, pl. 43, figs. 20 a-d. Miocene of Vienna Basin, Austria; *Pyrgolampros pliopseudogracilis* Sacco, 1892, Vol. 11, pl. 2, fig. 101. Pliocene (Astien) of the Italian Piedmont.. See also Pavia, 1975, pl. 11, figs. 16-19 [*Turbonilla* (*Pyrgolampros*)].

spiculum Deshayes, 1864, *Turbonilla*, p. 575, Atlas, pl. 21, figs, 1, 2. Eocene of France, not turbonillid but *Syrnola*.

spina Deshayes, 1824, *Auricula*, Vol. 2, pl. 8, figs. 10-11. Eocene of Parnes, France. By Orbigny, 1850, Lyell 1852, and Deshayes, 1864, p. 576, classified as *Turbonilla*, but it is a *Syrnola*. See Glibert, 1962, p. 13 and Gougerot, 1967, p. 108, fig. 30.

spiratissima Dubois, 1831, *Melania* (non vidi). Classified by Orbigny, 1852, Vol. III, p. 33 as *Chemnitzia*.

stazzanensis Sacco, 1892, *Strioturbonilla alpina* var..., Vol. 11, p.95, pl. 2, fig. 112. See *alpina* Sacco, 1892.

striata Hoernes, 1856, *Chemnitzia*, p. 541, pl. 43, figs. 21a, b. See remarks under *acicula* Lamarck, 1806, which is not a synonym.

striatellina Sacco, 1892, *Pyrgostelis miostriatula* var..., Vol. 11, no figure. See *miostriatula*, Sacco, 1892.

striatulus Linné, 1766, *Turbo*, Vol. II, p. 1238, no figure. Recent, Mediterranean. Assigned as type for *Pyrgostylus* by Monterosato, 1884. See also Kobelt, 1905, p. 159, pl. 73, figs. 22-27 and Nordsieck, 1972,p. 132, pl. 6, fig. 15. [Not

striatula von Koenen, 1882, see there]. Possible synonyms are: *Odostomia* (*Turbonilla*) *striatula* var. *albida* Monterosato, 1877, p. 40, no figure. Recent, Algeria; *Turbonilla cocconii* Fontannes, 1881, p. 131, pl. 8, figs. 1 and 2, *Turbonilla*, Pliocene of Vancluse, France; *Chemnitzia costaria* S. V. Wood, 1848, p. 80, pl. 9, figs. 3, 3a. Pliocene of Sutton, Gr. Britain; *Turbonilla expallida* Harmer, 1920, p. 564, pl. 49, fig. 19. Pliocene, St. Erth, Devon, Gr. Britain; *Melania pallida* Philippi, 1836, p. 157, pl. 9, fig. 8. Recent, Sicily. By some workers restricted to the Pliocene of the Mediterranaean; *Turbonilla potamoides* Cantraine, 1841. Listed by Bucquouy, Dautzenberg and Dollfus, 1883, p. 185; and Tryon, 1886, p. 327. Also by Kobelt,1905, p. 159; *Turbonilla striolata* Weinkauff, 1868, p. 210.*Lapsus calami* for *striatula*, Linné,1776; *Parthenia varicosa* Forbes, 1841, p. 189, no figure. Recent, Aegean Sea.

striatula von Koenen, 1882, *Turbonilla*, p. 255, pl. 6, figs., 12a, b. See *miostriatula* Sacco, 1892.

striatuloides Sacco, 1892, , *Pyrgostylus striatulolanceae* var..., Vol. 12, p. 10, pl. 1, fig. 143 (in Vol. 11). Pliocene of the Italian Piedmont.

striatulolanceae Sacco, 1892, Pyrgostylus, Vol, 12, p. 10, pl. 2, fig. 141(in Vol. 11). Pliocene of the Italian Piedmont. See also Fekih,1969, p. 44, pl. 8, fig. 6.

stricta Pallary, 1904, *Turbonilla*, p. 236, pl. 7, fig. 17. See *pallaryi* Dautzenberg, 1910. [Not *Turbonilla stricta* Verrill, 1873, which is *Turbonilla nivea* Stimpson, 1851. Recent, New England, nor *Turbonilla stricta* Clessin, 1900, p. 168, pl. 35, fig. 3. Recent, Macao, China.] Also see *pseudostricta* Nordsieck, 1972.

striolata Weinkauff, 1868, *Turbonilla*, p. 210. *Lapsus calami* for *striatula* Linné, 1766. See also Sacco, 1892, p. 9, (*Pyrgostylus*).

strozzi de Stefani and Pantanelli, 1878. no data, non vidi. See *delicata* Monterosato, 1874.

sturi Hoernes m.s., non vidi. Manuscript name only, cited by Stur, 1860, p. 80. (*Chemnitzia*).

subacicula Orbigny, 1852, *Turbonilla*, Vol. III, p. 35, No. 497. Miocene of southern France. Not turbonillid, but *Syrnola*. See also Peyrot, 1917, p. 309, pl. 9, figs. 24-27 and Kokay, 1966, pl. 6, fig. 6. [*Odostomia* (*Syrnola*)].

subalineata Sacco, 1892, *Pyrgostelis bilineata* var..., Vol. 12, pl. 2, fig. 137 (in Vol. 11). See *bilineata* Seguenza, 1876.

subalpina Sacco, 1892, *Strioturbonilla densecostata* var., Vol. 11, p. 96, pl. 2, fig. 116. See *crenata* Brown, 1827.

subanodulina Sacco, 1892, *Turbonilla* (*Pyrgolidium*) *internodula* var..., Vol. 11, p. 84, pl. 2, fig. 84. See *internodula* S. V. Wood, 1884.

subcompacta Boettger, 1906, *Turbonilla* (*Pyrgolampros*), p. 126, No. 441. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 243, pl. 12, fig. 41.

subcostellata Orbigny, 1852, *Turbonilla*, Vol. III, p. 35. See *costellata* Grateloup, 1827. [Not *Turbonilla subcostellata* Edwards m. s. (in) Newton, 1891, p. 182. Material in British Museum from Upper Eocene (Barton Beds) labelled *subcostellata*.

subcostellata Edwards m.s., (in) Newton, 1891, *Turbonilla* p. 182. Upper Eocene of Great Britain.

subcraticulata Orbigny, *Turbonilla* (non vidi). Referred to by Bunzel, 1869, p. 205 from the Miocene of the Vienna Basin.

subcylindrica Philippi, 1844, *Auricula*, p. 73, pl. 3, fig. 11. Oligocene of Germany. Not turbonillid but a *Syrnola*. Orbigny, 1852, Vol. III, p. 35 has it as *Turbonilla*. [Not *Turbonilla subcylindrica* Schepman, 1909, p. 245, pl. 17, fig. 11. Recent, Sulu Sea, Indonesia at 535 m.]. Synonyms appear to be (not verified as yet): *Eulimella exsubulata* Sacco, 1892, Vol. 11, p. 53. New name for *Turbonilla subulata* Merian, as figured by Speyer, 1869-71, pl. 25, figs. 17-19; *Turbonilla ino* Semper, 1861, p. 194. Oligocene of Lattorf, Germany. See also Speyer, 1871, p. 58, pl. 10, figs. 15, 16a, b; *Turbonilla nysti* Orbigny, 1852, Vol. III, p. 5, No. 70. New name for *T. spina* Nyst (non Deshayes, from the Oligocene of Klein Spauwen, Belgium; *Turbonillia speyeri* Semper, 1861, p. 358. Miocene of northern Germany. See also Speyer, 1871, p. 60, pl. 10, fig. 18; *Pyramidella subulata* "Merian" Braun (in) Walchner, 1850, p. 1123. See also Speyer, 1870, p. 59, pl. 10, figs. 17, 18, 19, 20, a,b,c,d. Tertiairies of Germany; *Turbonilla subulata* Sandberger, 1861, p. 172, pl. 15, figs. 4, 4a. Oligocene of Mainzer Basin, Germany; *Turbonilla turriculata* Bosquet, 1859, pl. 18, pl. 2, figs. 4a-c. Oligocene of South Limburg, the Netherlands. See also Speyer, 1871, p. 60, pl. 10, figs. 19. (*Turbonilla subulata* var...); *Turbonilla subulata* var. *vera* Speyer, 1871, p. 60, pl. 10, fig. 20. Oligocene of Germany.

subfasciolata Sacco, 1892. *Pyrgisculus scalaris* var..., Vol. 11, p. 71, pl. 1, fig. 119. See *scalaris* Philippi, 1836.

subgracilis Orbigny, 1852, *Turbonilla*, Vol. III, p. 35. New name for *Auricula gracilis* Philippi, 1844.

subhordacea Orbigny, 1850, *Chemnitzia*, Vol. II, p. 310. New name for *Melania hordacea* variety d of Deshayes. Fossil from Abbecourt, France.

sublaevigata Orbigny, 1852, *Chemnitzia*, Vol. III, p. 33. New name for *Melania laevigata* as identified by Dubois, 1831, non Deshayes, 1824.

submarginata Deshayes, 1864, *Turbonilla*, p. 569, Atlas, pl. 20, figs. 15-17. Eocene of Paris Basin, France. See also Cossmann and Pissarro, 1910-13, pl. 7, fig. 48-6, (*Turbonilla*).

subornata Orbigny, 1852, *Chemnitzia*, Vol. III, p. 33, No. 464. New name for *Melania ornata* Gratloup, 1838. (ex parte). See also there.

suplicata Seguenza, 1880, *Turbonilla*, p. 112, pl. 11, fig. 32. Miocene (Tortonian) of southern Italy. Dautzenberg and Fischer, 1906, p. 183, refer in error to *subplicata* instead of *pseudoplicata*, which is an asiatic *Odostomia*.

subscalaris Boettger, no data, non vidi. Cited by Cossmann, 1892, p. 351 as *Turbonilla*,but later by Cossmann, 1921, p. 298 as *Belonidum*.

subterranea Wrigley, 1940, *Turbonilla*, p. 7. Eocene (London Clay), Gr. Britain. There are some synonyms (see also Wrigley, 1940): *Turbonilla sulcata* var. *clarendonensis* Edwards m.s., (in) Newton, 1891, p. 182 and *Turbonilla sulcata* Edwards, m.s.,(in) Newton, 1891, p. 182, both from the Eocene of Gr. Britain; *Turbonilla tenuiplica* Edwards m.s. (in) Newton, 1891, p. 182. Eocene of Gr. Britain. [Not *tenuiplicata* Deshayes, 1824, *Melania*, see there]. Cossmann, 1899, p. 138 noted this preoccupation of *tenuiplica* and invented the name *Turbonilla newtoni* Cossmann, 1899. However, because all of the Edwards manuscript names, which are merely listed by Newton must be considered nomina nuda also Cossmann's replacement name is a nomen nudum.

subtilissima Dautzenberg, 1912, *Turbonilla*, p. 66, pl. 3, figs. 7-10. Recent, Bay of Libreville, West Coast of Africa.

subtorquata Sacco, 1892, *Pyrgolampros taurinensis* var..., Vol. 11, p. 86, pl. 2, fig., 86. See *taurinensis* Sacco, 1892.

subulata "Merian" Braun, 1851 *Pyramidella* (in) Walchner's Geognosie, Vol. III, p. 1123. See *subcylindrica* Philippi, 1844. See also *ino* Semper, 1861. [Not *Turbonilla subulata* S. V. Wood, 1842 (see there), nor *Turbonilla subulata* Sandberger, 1861 see there)].

subulata S. V. Wood, 1841, *Turbonilla*, p. 536, no figure. Merely a nomen nudum for a Pliocene fossil, from Gr. Britain. See also Bronn, 1848, p. 1328 and Weinkauf, 1865, p. 184.

subulata Sandberger, 1861, *Turbonilla*, p. 172, pl. 15, figs. 4, 4a, which is probably the same as *subulata* "Merian", 1851. See also

subcylindrica Philippi, 1844. [Note: all of the above species named *subulata* are different from the following: *Chemnitzia subulata* C. B. Adams, 1850. Recent, Jamaica; *Turbonilla subulata* Holmes, 1859. Pleistocene of South Carolina; and *Turbonilla subulata* Clessin, 1900, Recent; Amboina, Indonesia].

subulina Monterosato, 1889, Turbonilla, p. 38, no figure. Recent, Atlantic coast of Maroc (Mogador). See Dautzenburg, 1917, p. 68 and and Pasteur-Humbert, 1962, p. 153. Possibly insufficiently described.

subumbilicata Grateloup, 1838, *Actaeon*, p. 276, pl. 6, fig. 51. Miocene of western, middle and southern Europe. Not turbonillid (*Eulimella*) but often reported as *Turbonilla*. There are many synonyms and "varities", (so far not confirmed): *Eulimella subumbilicata* var. *anfractielongata* Sacco, 1892, Vol. 11, p. 52, pl. 2, fig. 9. Miocene (Elveziano) of Italy; *Eulimella subumbilicatoides* var. *anisocycloidea* Sacco, 1892, Vol. 11, p. 56, pl. 2, fig. 22. Pliocene (Astien) of Italy; *Syrnola subumbilicata* var. *bearnensis* Cossmann and Peyrot, 1913, p. 305, Atlas (1919), pl. 9, figs 14-19. Miocene of Bearn, France; *Eulimella subumbilicatoides* var. *clavatula* Sacco, 1892, Vol. 11, p. 56, pl. 2, fig. 21. Pliocene (Astien) of the Italian Piedmont; *Auricula incerta* var. *conica* Grateloup, 1840, Vol. 1, Plicacéens, figs. 63-64. Miocene of southern France; *Eulimella subumbilicata* var. *conicula* Sacco, 1892, Vol. 11, p. 52. New name given to *Actaeon subumbilicata* Grateloup, pl. 6, fig. 52 (not fig. 51); *Eulimella exsubumbilicata* Sacco, 1892, Vol. 11, p. 52. New name given to *Turbonilla subumbilicata* Grateloup as reported by von Koenen, 1882, pl. 6, fig. 3, from Germany; *Odontostomia hontensis* Czepreghi-Mesnerics, 1956, p. 393 and 444, pl. 3, figs. 33-34. Miocene of Hungary. Also see Strausz, 1966, p. 201; *Auricula incerta* Grateloup, 1840, Plicacéens, figs. 61-64. Miocene of southern France; *Syrnola* (*Pachysyrnola*) *ligeriensis* Peyrot,, 1938, p. 52, pl. 1, figs. 39-40. Miocene of France; *Syrnola maxima* Boettger, 1906, p. 117, No. 414, no figure. See also Zilch, 1934, p. 239, pl. 12, fig. 25. Miocene of Hungary; *Turbonilla obscura* Reuss, 1867, p. 159, pl. 7, figs. 5-7. Miocene of Poland (Wieliezka); *Eulimella subumblicatoides* var. *subulatula* Sacco, 1892, Vol. 11, p. 55, pl. 2, fig. 20. Tertiaries of northern Italy; *Eulimella subumbilicata* var. *taurinensis* Sacco, 1892, Vol. 11, P. 52, pl. 2, fig. 8. Miocene (Elveziano) of the Italian Piedmont; *Odostomia* (*Syrnola*)*subumbilicata* var. *turoniensis* Glibert, 1949, p. 186,

pl. 12, fig. 9, Miocene of France. Later Glibert, 1962, p.14 (*Syrnola* s.s.) changed the name to *Syrnola subumbilicata ligeriensis* Peyrot, 1938.

subventricosa Lowe, 1840, *Chemnitzia bulinea*, p. 40, no figure. Not turbonillid but *Actaeopyramis*. Recent, Madeira.

sulcata Briart and Cornet, 1877, *Turbonilla*, p. 42, pl. 16, figs, 3a, c. Montien of Belgium. Not turbonillid but according to Glibert, 1973, p. 88, a *Tiberia* (*Orinella*). A synonym is *Syrnola* (*Cossmannica*) *zonifera* Cossmann, 1915, p. 46, pl. 3, figs. 63-64, Montien of Belgium. [Not *Turbonilla sulcata* de Folin, 18.., Fonds de la Mer, Vol. 1, pl. 9, fig. 10. Recent, Mauritius; nor *Turbonilla sulcata* Edwards m.s. (in) Newton, 1891, which is *T. subterranea* Wrigley, 1940, see there; nor *Exesilla sulcata* Laseron, 1959, p. 216, figs. 94-95. Recent from Australia, which is the type of *Exesilla*].

sulcata Edwards m.s.,*Turbonilla*, 1891 (in) Newton, p. 182. See *subterranea* Wrigley, 1940, p. 7.

sulcatolanceae Sacco, 1892, *Pyrgostelis hemiacirseoides* var..., Vol. 12, pl. 2, fig. 149. See *hemiacirseoides* Sacco, 1892.

superata Nordsieck, 1972, *Turbonilla* (*Graciliturbonilla*) *hamata*..., p. 125, pl. 5, fig. 24. See *delicata* Monterosato, 1874.

superstructa Boettger, 1906, *Turbonilla* (*Strioturbonilla*) *densecostata* var..., p. 132, No. 457. See *crenata* Brown, 1827.

suturalis Cossmann, 1888, *Turbonilla*, p. 111, pl. 4, fig. 41. Eocene of La Guépelle, France. Not turbonillid, but *Belonidium* [Not *Dunkeria suturalis* Gould, 1862, p. 280. no figure. Recent, Charleston Harbour, South Carolina. See also Dall, 1885, p. 110 and 320; Tryon, 1886, p. 338 and Bush, 1899, p. 174 (*Turbonilla*)].

tarbelliana Grateloup, 1838, *Melania* (non vidi). Probably not turbonillid. Orbigny, 1850, Vol. II, p. 311, has it as *Turbonilla*. Miocene of southern France.

taurinensis Sacco, 1892. *Pyrgolampros*, Vol. 11, p. 86, pl. 2, fig. 85. Miocene (Elveziano) of the Italian Piedmont. Synonyms are probably: *Pyrgolampros miosulcatulus* Sacco, 1892, Vol. 11, p. 86, pl. 2, fig. 87. Miocene (Elveziano) of the Italian Piedmont; *Pyrgolampros taurinensis* var. *subtorquatus* Sacco, 1892, Vol. 11, p. 86, pl. 2, fig.86, which by Cossmann, 1921, p. 288 is considered a full species. [Not *Turbonilla pseudocostellata* var. *taurinensis* Sacco, 1892. See there].

taurinensis Sacco, 1892, *Turbonilla pseudocostellata* var..., Vol. 11, p. 77, pl. 2, fig. 62. See *scala* Eichwald, 1853.

tauropinensis Sacco, 1892, *Pyrgolampros* ? Vol. 11, p. 87, pl. 2, fig. 90. Miocene (Elveziano) of the Italian Piedmont.

taurostriatuloides Sacco, 1892, *Pyrgostylus*, Vol. 12, p. 11, pl. 2, fig. 146 (in Vol. 11). Miocene (Elveziano) of the Italian Piedmont.

taurotransiens Sacco, 1892, *Pyrgolampros mioperplicatulus* var..., Vol. 11, p. 88, pl. 2, fig. 92. Miocene of the Piedmont, Italy.

tenuiplica Edwards m.s. *Turbonilla* (in) Newton, 1891, p. 182. Eocene of Gr. Britain. Is *Turbonilla subterranea* Wrigley, 1940, see there.

tenuiplica Deshayes, 1824, *Melania*, p. 111, No. 11, pl. 13, figs. 20-21. Eocene of Paris Basin, France. Bronn, 1848, unjustifiably changed the name to *tenuiplicata*, which most authors, even Deshayes, 1864, p. 569, pl. 27, figs. 19-20, (*Turbonilla*) used. It is a *Pyrgolampros*. A synonym is *Turbonilla pulchra* Deshayes, 1864, p. 567, Atlas, pl. 20, figs. 24-25. [Not *Turbonilla tenuiplica* Edwards m.s. 1891].

tenuis Pallary, 1904, *Turbonilla*, p. 238, pl. 7, fig. 19. Recent, Sfax, Tunisia. See also Nordsieck, 1972, p. 122-123, pl. 5, fig. 4. [Not *Turbonilla tenuis* Turton, 1932, p. 94, pl. 21, fig. 687. Recent, Port Alfred, South Africa; nor *Turbonilla evoluta* var. *tenuis* von Koenen, 1891. See there].

tenuis von Koenen, 1891, *Turbonilla evoluta* var..., p. 627, pl. 43, figs, 14a, b. Oligocene of Germany. See *evoluta* von Koenen. 1891.

tenuissima Etheridge and Bell m.s., *Chemnitzia*, 1898 (in) A. Bell, p. 148. Pliocene of St. Erth, England. Harmer, 1920 is the valid author: p. 571, pl. 49, fig. 42. [Not *Turbonilla tenuissima* Hedley, 1909, p. 450, pl. 12, fig. 8. Recent, Queensland.

terebellum Philippi, 1844, *Chemnitzia*, Vol. II, p. 138, pl. 24, fig. 12. Not turbonillid, but *Chrysallida interstincta* Montagu, 1803.

terebraeformis Meneghini, no data, non vidi. Cited as *Pyrgolampros* by Sacco, 1892, p. 88.

terebralis Grateloup, 1827, *Auricula*, p. 106, No. 76. Miocene of southern France. Cited by Bronn, 1848, p. 1328. as *Turbonilla*. Also by Orbigny, 1852, Vol. III, p. 5,(*Turbonilla*).

terebriformis Smith, 1890, no data, non vidi.

teutonoplicatula Sacco, 1892, *Pyrgolampros*, Vol. 11, p. 86. See *plicatula* Brocchi, 1814.

theclae Boettger, 1901, *Turbonilla* (*Pyrgostylus*), p. 111, No. 356. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 244, *Turbonilla* (*Mormula*) and Cossmann, 1921, p. 294 (*Pyrgostylus*).

tornatella Grateloup, *Actaeon*, 1838, non vidi. Cited by Orbigny, 1852, Vol. III, p. 5 as *Turbonilla*.

transiens Cerulli-Irelli, 1914, *Turbonilla obliquata* var..., p. 269, pl. 23, figs. 34-35. See *obliquata* Philippi, 1844.

transparens Leach, 1852, *Turbonella* (sic!). p. 166. Not turbonillid, but probably *Odostomia ambigua* Maton and Rackett, 1807.

truncatelloides Smith, 1890, *Turbonilla*, p. 276, pl. 23, fig. 20. Recent, St. Helena.

tryoni Bartsch, 1909, *Turbonilla* (*Syrnola*) p. 71. See *angasi*, Clessin, 1900.

turbifacta Coen, 1933, *Turbonilla* (*Tragula*) *fenestrata* var..., p. 54 and 166, pl. 4, fig. 7. *Tragula* is not turbonillid. This is a manuscript name of Monterosato, unnecessarily revived by Coen.

turella Orbigny, 1850, *Turbonilla*, Vol. II, p. 311, No. 246. See *turrella* Melville.

turonensis Peyrot, 1938, *Turbonilla* (*Strioturbonilla*), p. 67, pl. 3, figs. 29 and 34. Miocene of France. A possible synonym is *Turbonilla* (*Pyrgolampros*) *dautzenbergi* Glibert, 1949, p. 30, and 192, pl. 11, fig. 6. Miocene of France and the Netherlands. See also Nordsieck, 1972, p. 129, pl. 33, fig. 235.

turrella Melleville, 1843, *Pyramidella*, p. 52, pl. 4, figs. 26-28, Tertiary fossil, France. See also Deshayes, 1864, p. 567, pl. 20, figs. 20, 21; Cossmann and Pissarro, 1910-13, pl. 7, fig. 48-2; Cossmann, 1921, p. 288 (*Pyrgolampros*).

turricula Fekih, 1969, *Mormula*, p. 41, pl. 7, fig. 10. Pliocene of Tunisia. [Not *Tornatella turricula* Eichwald, 1853, which is a *Sulcoturbonilla* (see there)].

turricula Eichwald, 1853, *Tornatella*, p. 262, pl. 10, fig. 2. Miocene of France and Middle Europe. Is a *Sulcoturbonilla*. See also Friedberg, 1959, p. 459, pl. 28, fig. 6 *Turbonilla* (*Strioturbonilla*) and Kokay, 1966, pl. 7, figs. 2-4. There are some synonyms and "varieties". *Turbonilla* (*Sulcoturbonilla*) *turricula* var. *alloeomorpha* Boettger, 1906, p. 131, No. 453. Miocene of Kostej, Hungary. See Zilch, 1934, p. 242 and Cossmann, 1921, p. 283, text fig, 102 (*Sulcoturbonilla*); *Turbonilla* (*Sulcoturbonilla*) *benoisti* Cossmann and Peyrot, 1917, p. 361, pl. 10, figs. 77-78. Miocene (Burdigalien) of France; *Tornatella costellata* Dujardin, 1837, p. 282, pl. 19, fig. 25. Miocene of Touraine, France. Perhaps not turbonillid. See Glibert, 1949, p. 183, pl. 12, fig. 2 as *Kleinella* (*Sulcoturbonilla*). Also see Sieber, 1953, p. 186 and Sieber, 1958, p. 130. Dujardin's name is

preoccupied by Grateloup's *Auricula costellata*; *Turbonilla* (*Sulcoturbonilla*) *moulinsi* Cossmann, 1921, p. 282, pl. 6, figs. 51-52, (poorly validated); *Sulcoturbonilla turricula* var. *conicomutinensis* Sacco, 1892, Vol. 11, p. 92, pl. 2, fig. 107. Miocene of Monte Gibbio of the Italian Piedmont.

turriculata Bosquet, 1859, *Turbonilla*, p. 18, pl. 2, figs. 4a-c. See *subcylindrica* Philippi, 1843.

turriculiformis Boettger, 1906, *Turbonilla* (*Pyrgolampros*) p. 130, No. 452. Miocene of Kostej, Hungary. See also Zilch, 1934, p. 244, pl. 13, fig. 46.

turritella Scacchi, 1835, *Rissoa*, no data, non vidi. See *pusilla* Philippi, 1844.

turritelliformis Müller, 1851, *Chemnitzia*, Vol. 11, p. 9, pl. 4, fig. 7. Fide Holzapfel, 1887, p. 133, pl. 14, fig. 13. Cretaceous Greensand of Vaals, the Netherlands. Of doubtful affinity.

turritodelicata Sacco, 1892, *Turbonilla*, Vol. 11, p. 81, pl. 2, fig. 75. Pliocene of the Italian Piedmont.

turritolonga Sacco, 1892, *Turbonilla lactea* var..., Vol. 11, p. 73, pl. 2, fig. 45. See *Turbo lacteus* Linné, 1758.

turritoparva Sacco, 1892,*Turbonilla lactea* var..., Vol. 11, P. 75, pl. 2, fig. 56. See *Turbo lacteus* Linné, 1758.

turrituloides Sacco, 1892, *Turbonilla* (*Pyrgolidium*) *internodula* var..., Vol. 11, p. 84, pl. 2, fig. 83. See *internodula* S. V. Wood, 1848.

typica Dall and Bartsch, 1903, *Turbonilla*, p. 269, no figure. New name for *Turbonilla plicatula* Risso, 1826, non Brocchi, 1814. Introduced as type for the genus *Turbonilla*. See also Dall and Bartsch, 1909, p. 11, Corgan, 1967, p. 200-202 and Wise, 1996, and remarks under *costulata* Risso, 1826.

umbilicaris Malm, 1863, *Turbonilla*, p. 128, pl. 2, fig. 10. Recent, Sweden. Not turbonillid, but *Brachystomia*.

umbilicata Fekih, 1969, *Mormula*, p. 42, pl. 7, fig. 3. Pliocene of Tunisia. [Not *Pasithea umbilicata* Leach, 1833, p. 103, pl. 4, fig. 85, which Orbigny, 1852, Vol. II, p. 342, lists as *Turbonilla*.

undata Watson, 1897, *Odostomia* (*Turbonilla*), p. 262, p;. 18, fig. 31. Recent, Western Europe, Mediterranean. Not turbonillid, but a *Trabecula* with several synonyms.

undulata von Koenen, 1882, *Turbonilla*, p. 260, pl. 6, fig. 5. Miocene of Dingden, Germany. Is a *Pyrgolampros*. See also Kautsky, 1925, p. 77, pl. 6, fig. 33; Voorthuysen, 1944, p. 36, pl. 13, figs. 6-8 and Anderson, 1964, p. 327, pl. 48, figs. 290a, b.

unica Montagu, *Chemnitzia*, no data, non vidi. Cited in S. V. Wood, 1948, p. 83, pl. 10, fig. 9. Pliocene of Gr. Britain. Sacco, 1892, mentions (Vol. 11, p. 81) that also exists *Turbonilla*

exunica.

unifasciata Forbes, 1844, *Eulima*, p. 188, no figure. Not a turbonillid, but often reported as such. See also Dautzenberg , 1889, p. 60; Dautzenberg and Fischer,1896, p. 468; Kobelt, 1905, p. 170, pl. 67, fig. 2 (*Eulimella*). A possible synonym is *Turbonilla smithii* Verrill, 1881, p. 380,no figure. Recent, off the coast of New England, U. S. A.

vaillanti Dautzenberg and Fischer, 1896, *Turbonilla*, p. 471, pl. 20, figs. 4,5. Recent, Azores, in very deep water. See also Nordsieck, 1972, p. 130, pl. 6, fig. 9.

varians Leach, *Turbonilla*, no data, non vidi. Referred to by Pfeiffer, 1850, p. 59.

varicosa Forbes, 1844, *Parthenia*, p. 189. See *striatulus* Linné, 1766. [Not *Turbonilla varicosa* Doderlein, 1862. See there, nor *Chemnitzia varicosa* A. Adams, 1855 which is Indo-Pacific].

varicosa Doderlein, 1862,*Turbonilla*, non vidi. Pliocene of Italy. See Seguenza, 1880, p. 264, and Sacco, 1892, p. 11. Also Dall and Bartsch, 1906, p. 349 (gives erroneous year).

varicula S. V. Wood, 1848, *Chemnitzia*, p. 84, pl. 10, figs. 10, 10a. Pliocene of Gr. Britain. Nomen nudum in S. V. Wood, 1842. See also Jeffreys, 1871, p. 143 (*Cerithium*) and Harmer, 1920, p. 568, pl. 49, fig. 26 [*Turbonilla* (*Pyrgostelis*)]. There is a "variety": *Turbonilla* (*Pyrgostelis*) *varicula* var. *expansa* Harmer, 1920, p. 568, pl. 49, fig. 27. Pliocene of Walton on Maze, Gr. Britain.

variculosa Semper, 1861, *Turbonilla*, p. 363, no figure. Tertiary of Germany. See also Speyer, 1871, pl. 11, figs. 3, 3a, and 4a-e; Koch and Wiechmann, 1872, p. 100, pl. 3, fig. 8, and Lienenklaus, 1891, p. 37.

ventricosa Cerulli-Irelli, 1914, *Turbonilla rufa* var..., p. 273, pl. 23, fig. 53. See *crenata* Brown, 1827.

venusta Monterosato, 1875, *Odostomia* (*Turbonilla*), p. 33. See *amoena* Monterosato, 1878. [Not *Turbonilla venusta* Issel, 1869, p. 175 and 334, pl. 3, fig. 34 of Savigny, 1826. Recent, Red Sea.

vera Speyer, 1871, *Turbonilla subulata* var..., p. 60, pl. 10, fig. 20. See *subcylindrica* Philippi, 1843.

vermicularis von Koenen, 1891, *Turbonilla*, p. 630, pl. 43, figs. 5 and 21a, b. Lower Oligocene of Germany.

verticalis Marshall, 1900, *Odostomia*, p. 333, no figure. Recent, Bantry Bay, Gr. Britain. See also Marshall, 1912, pl. 5, fig. 127 (*Odostomia*); Winckworth, 1932, p. 227 (*Turbonilla*) and Nordsieck, 1972, p. 127. *Tubonilla* (*Cylindroturbonilla*).

vidali Cossmann, 1921, *Turbonilla* (*Pyrgostelis*), p. 291, pl. 6, figs. 71-72. New name for *P. rufa praecedens* Sacco, 1892, from the Miocene of Catalonia.

vitrea Leach, 1852, *Turbonilla*, p. 167. Recent, off Devon, Gr. Britain, referred to by Pfeiffer, 1850, p. 59 and Chenu, 1846, p. 143, pl. 4, fig. 7. [Not *Turbonilla vitrea* Laseron, 1959, p. 234, fig. 144. Recent, Australia].

warringtoni A. Bell, 1893, *Chemnitzia*, p. 628. See *Turbonilla obliqua* Degrange-Touzin, 1895.

weinheimensis Schopp, 1888, *Turbonilla*, p. 388. Oligocene of Weinheim. Germany. See also Wenz, 1932, p. 31, (*Syrnola*?).

weinkauffi Dunker, 1862, *Turbonilla* (in) Weinkauff, 1862, p. 343, pl. 13, fig. 9. See *fenestrata* Forbes, 1848.

wiechmanni Speyer, 1871, *Turbonilla*, p. 61, pl. 11, figs. 1a, b,c, d, e. Upper Oligocene of Niederkaufingen, Germany. See also Koch and Wiechmann, 1872, p. 106, pl. 3, fig. 10, and Görges, 1952, p. 78.

winkleri Mayer, 1861,*Chemnitzia*, p. 368, pl. 15, fig. 9. This is not the original description, which I have not seen.

woodwardii Gardner, 1876, *Pyrgiscus*, p. 112, pl. 3, fig. 19. Upper Greensand, Cretaceous. Gr. Britain. Probably not pyramidelid. Described from a single specimen.

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